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ABSTRACT

A statistical and narrative summary of the results of the 1984-1985 Survey of Earned Doctorates is presented. Basic information, such as sex, field of study, institution, and year of Ph.D., is presented for all of the 31,201 doctorate recipients, while complete questionnaire data are included for 29,517 Ph.D. recipients. Research and applied-research doctorates in all fields are covered, excluding degrees such as the M.D., D.D.S, O.D., D.V.M., and J.D. Tables provide the following information for 1985: number of doctorate recipients by sex and subfield; number of doctorate recipients by citizenship, racial/ethnic group, and subfield; statistical profile of doctorate recipients by field of doctorate; sources of support in graduate school of doctorate recipients by sex and summary field; state of doctoral institution of doctorate recipients by sex and summary field; and statistical profile of doctorate recipients by racial/ethnic group and citizenship status. Information is also provided on the number of doctorate recipients by subfield, 1975-1985. Appended are foreign country groupings, the questionnaire, and specialties list. (SW)

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Summary Report 1985

Doctorate Recipients From United States Universities

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HIGHLIGHTS

- The *total number of research doctorates* earned in 1985 was 31,201, which continues a nearly flat trend in the number of doctorates awarded by U.S. universities since the late 1970s. This number--down from the 1973 peak of 33,755--has not fluctuated by more than one percent since 1978.

- While the total number of doctorates has been virtually level, the *composition of the doctoral cohort* has been changing. The pattern of degree attainment has shifted by sex, by field, and by citizenship. In the last decade, women increased their proportion of new Ph.D.s from 23.3 percent to 34.3 percent. Significant field changes emerged: the number of recipients in life sciences grew by 14.4 percent, whereas the number in humanities declined by 29.8 percent. Finally, U.S. citizens diminished as a source of the new doctorate cohort, while temporary visa-holders increased, especially in engineering.

- Also changing is the country of citizenship of *non-U.S. recipients*. The most rapidly growing group of non-U.S. citizens is from east Asia, particularly Taiwan. The majority of this group earned degrees in physical sciences and engineering, the two fields with the largest component of foreign nationals.

- There have been changes in the last 10 years in the U.S. *employment sectors* to which new Ph.D.s make definite commitments. Losing ground has been the academic sector, which had been the employer for 60.4 percent of recipients with definite plans in 1976 but which hired only 48.3 percent in 1985. Industry gained employment commitments: in 1976 it attracted 11.7 percent of new recipients, and in 1985 it recruited 20.3 percent.

- Among the *U.S. citizen cohort*, a good deal of diversity exi[illegible] between the sexes and among the races in terms of field selection, median times-to-d[illegible]e, sources of graduate school support, postgraduation employment commitments, and employment sector.

- In 1985, the lowest proportion of *U.S. minorities* was found in the physical sciences (5.9 percent), and the highest was in education (13.5 percent). Asians selected engineering and the natural sciences over other fields while Hispanics, Blacks, and most women's cohorts chose education.

- In *median time-to-degree*, the gaps diminished between U.S. men and women and between Whites and minorities when data were disaggregated by field. In some cases, the gap in time-lapse--which has increased for all groups over the last decade--was reversed when field of Ph.D. was held constant.

- Overall, women and Blacks were much more likely to have relied on personal *sources of graduate support* than the other candidates; however, this difference weakens when disaggregated by field. In most fields, Asians received more university-related support than did other groups, and Blacks received less. Source of support appeared to affect time-lapse to degree.

- The greatest proportion of U.S. doctorates with *definite postgraduation plans* received their degrees in professional fields--83.1 percent. The largest proportion of graduates without definite plans were those from humanities fields--35.3 percent. Larger proportions of minority doctorates than Whites did not have definite plans.

- As an employer of new American Ph.D.s, academe declined while industry increased. The reduction of academic placements was most apparent in the *sectoral commitments* of Black men and most cohorts of women. With the exception of Hispanic women, each group increased its proportion of new Ph.D.s entering industry, especially Asian men and women.

Summary Report 1985

Doctorate Recipients From United States Universities

The Survey of Earned Doctorates is conducted by the
National Research Council for
the National Science Foundation,
the U.S. Department of Education,
the National Institutes of Health, and
the National Endowment for the Humanities

Susan L. Coyle
Project Manager

Office of Scientific and Engineering Personnel
National Research Council

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NOTICE: The project that is the subject of this report was approved by the Governing Board of the National Research Council, whose members are drawn from the councils of the National Academy of Sciences, the National Academy of Engineering, and the Institute of Medicine. The survey project is part of the program of the Office of Scientific and Engineering Personnel.

This report has been reviewed by a group of persons other than the author according to procedures approved by a Report Review Committee consisting of members of the National Academy of Sciences, the National Academy of Engineering, and the Institute of Medicine.

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This report is based on research conducted by the Office of Scientific and Engineering Personnel (OSEP) of the National Research Council, with the support of the National Science Foundation, the U.S. Department of Education, the National Institutes of Health, and the National Endowment for the Humanities under NSF Contract No. SRS-8517008. Opinions, findings, conclusions, or recommendations expressed in this publication are those of OSEP and do not necessarily reflect the views of the sponsoring agencies.

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FOREWORD

This report presents a brief summary of the results of the 1984-1985 Survey of Earned Doctorates, which has been conducted each year since 1958 by the National Research Council's Office of Scientific and Engineering Personnel (OSEP) and its predecessor, the Commission on Human Resources. Questionnaire forms, distributed with the cooperation of the graduate deans of U.S. universities, are filled in by graduates as they complete all requirements for their doctoral degrees. The doctorates reported here were earned during the period July 1, 1984, through June 30, 1985, and include research and applied-research doctorates in all fields. Professional degrees such as the M.D., D.D.S., O.D., D.V.M., and J.D. are not covered by this survey. A full list of degrees included can be found on the inside back cover; for convenience throughout this report, "Ph.D." is used to represent any of the doctorate degrees covered by the survey.

Responses were received from 29,517, or 95 percent, of the 31,201 persons who earned the doctorate in 1985. When individuals did not complete the questionnaire, abbreviated records were compiled using information from the universities' commencement bulletins. As a result, basic information--such as sex, field, institution, and year of Ph.D.--is available for all of the 31,201 doctorate recipients.

This *Summary Report* is the nineteenth in an annual series of reports that began in 1967. Trend data from earlier periods can be found in the book *A Century of Doctorates: Data Analyses of Growth and Change* (National Academy of Sciences, 1978). All survey responses become part of the Doctorate Records File (DRF), a virtually complete data bank on doctorate recipients from 1920 to 1985. More than five-sixths of the 818,669 records now in the DRF have come from results of the 1958 to 1985 surveys. For doctorates granted during the 1920 to 1957 period, information was compiled from commencement bulletins, registrars' records, and other published material.

The conduct of the Survey of Earned Doctorates, the maintenance of the resulting data file, and the publication of this report are funded jointly by the National Science Foundation, the National Institutes of Health, the U.S. Department of Education, and the National Endowment for the Humanities. OSEP thanks these agencies for their support. The interest, aid, and counsel of Mary Golladay (NSF), the project officer for the agencies, are appreciated. In addition, Felix Lindsay of the National Science Foundation, George Bowden of the National Institutes of Health, Jeffrey Thomas of the National Endowment for the Humanities, and Charles Miller of the U.S. Department of Education have provided constructive advice on the design and analysis of the survey, a contribution that increases its relevance to national policy issues. We also express our thanks to the graduate deans in the doctorate-granting institutions for their continuing interest in and assistance to this project.

The Survey of Earned Doctorates is conducted under the administrative supervision of Susan Coyle. Delores Thurgood was responsible for the development of the summary statistics. Special appreciation also goes to Eileen Milner, who supervised the coding and editing of the data; to George Boyce, manager of OSEP's Data Processing Section; to Joseph Finan and Elise Brand, who were responsible for the computer programming and processing; to Joseph Quigley for manuscript production; and to Yupin Bae for the

generation of most graphics. Linda Dix, OSEP's reports officer, edited both the draft and final manuscripts.

OSEP is concerned with those activities of the National Research Council that contribute to the more effective development and utilization of the nation's scholars and research personnel. Its programs seek to strengthen higher education and to develop better understanding of the education process. It is hoped that reporting of the present data to education institutions, government agencies, and professional societies will facilitate planning in higher education. Suggestions for improvement of the content or format of the report, other comments, and questions are welcome.

CONTENTS

INTRODUCTION	1
TRENDS IN THE NUMBER OF DOCTORATES BY FIELD	1
Men and Women Doctorate Recipients	2
Field Selections	2
Citizenship Status of New Doctorate Recipients	5
Country of Citizenship	7
Postgraduation Employment Commitments	8
MINORITY AND WOMEN DOCTORATE RECIPIENTS	12
Trends in Proportions Earning Degrees	12
Field Composition	14
Median Time-to-Degree	20
Sources of Support	24
Status of Postgraduation Plans	28
Employment Commitments	34
Summary	35
APPENDIXES	37
A The Five Basic Tables	38
1 Number of Doctorate Recipients, by Sex and Subfield, 1985	40
1A Number of Doctorate Recipients, by Citizenship, Racial/Ethnic Group, and Subfield, 1985	42
2 Statistical Profile of Doctorate Recipients, by Field of Doctorate, 1985	46
3 Sources of Support in Graduate School of Doctorate Recipients, by Sex and Summary Field, 1985	52
4 State of Doctoral Institution of Doctorate Recipients, by Sex and Summary Field, 1985	53
5 Statistical Profile of Doctorate Recipients, by Racial/Ethnic Group and U.S. Citizenship Status, 1985	54
B Number of Doctorate Recipients, by Fine Field, 1975-1985	56
C Foreign Country Groupings	60

LIST OF TABLES

A Doctorates Awarded by U.S. Universities, 1960-1985, 1
B Doctorates Awarded by U.S. Universities, by Broad Field and Sex, 1976-1985, 3
C Percentage Distribution of Doctorate Recipients, by Citizenship and Broad Field, 1960-1985, 6
D Country of Citizenship of Non-U.S. Recipients, 1960-1985, 7
E Country of Citizenship of Non-U.S. Recipients, by Broad Field, 1985, 8
F Postgraduation Employment Commitments, by Employment Sector and Sex, 1976-1985 (U.S. Citizens and Non-U.S. Citizens with Permanent Visas), 10
G Race/Ethnicity of Doctorate Recipients, 1975-1985 (U.S. Citizens), 13
H Women as a Proportion of Doctorate Recipients, by Race, 1975-1985 (U.S. Citizens), 15
I Field Selection of Minority Ph.D.s, 1975 and 1985 (U.S. Citizens), 17
J Field Selection of Women Doctorate Recipients, 1975 and 1985 (U.S. Citizens), 19
K Median Years to Degree, by Field, Sex, and Minority Status, 1985 (U.S. Citizens), 22
L Primary Sources of Support, by Field and Sex, 1985 (U.S. Citizens), 25
M Primary Sources of Support, by Field and Minority Status, 1985 (U.S. Citizens), 26
N Median Time-to-Degree, by Primary Source of Support, Field, Race, and Sex, 1985 (U.S. Citizens), 27
O Status of Postgraduation Plans, by Field, Sex, and Race, 1985 (U.S. Citizens), 30
P Postgraduation Employment Commitments, by Employment Sector, Sex, and Minority Status, 1975 and 1985 (U.S. Citizens), 34
Q Postgraduation Employment Commitments, by Field of Ph.D., 1975 and 1985 (U.S. Citizens), 35

LIST OF FIGURES

1 Doctorates awarded by U.S. universities, 1960-1985, 2
2 Doctorates awarded by U.S. universities, by broad field and sex, 1975-1985, 4
3 Definite employment commitments of new doctorate recipients, by sex, 1976 and 1985, 11
4 Field composition, by minorities, 1975 and 1985 (U.S. citizens), 16
5 Field composition, by women Ph.D.s, 1985 (U.S. citizens), 18
6 Field composition, by minority women, 1985 (U.S. citizens), 18
7 Median years to degree, by minority status, 1975-1985 (U.S. citizens), 20
8 Median years to degree, by sex and race, 1975-1985 (U.S. citizens), 21
9 Percentage of new doctorates with definite postgraduation commitments, by race, 1975-1985 (U.S. citizens), 29
10 Percentage of new doctorates with definite postgraduation commitments, by sex and field, 1975-1985 (U.S. citizens), 32

INTRODUCTION

In 1985, 31,201 doctorate recipients graduated from 330 universities in the United States. A profile of these recipients--their demographic composition, degree-earning processes, and postgraduation plans--is drawn in this report, and comparisons are made to earlier cohorts to illustrate changing patterns in participation and outcomes at the doctoral level. These patterns are also examined by broad field, so that shifts within specialty areas can be noted as well.

This year's special section highlights data on American women and minority doctorate recipients. Because averages often mask the multidimensional nature of a class of doctorates, each subgroup is discussed separately so that the whole can be seen in light of each part's contributions. The contours of each subgroup are followed over the period 1975-1985, again to illustrate changing patterns of participation.

The special sections of other recent reports focused on types of U.S. baccalaureate sources of Ph.D.s, their output and their "productivity" (1984), employment plans and citizenship characteristics of recipients entering the U.S. labor force (1983), and trends in new recipients' postdoctoral study and employment plans (1982).

TRENDS IN THE NUMBER OF DOCTORATES BY FIELD

In the recent past, the number of doctorate recipients has fluctuated only slightly, down from a high in 1973 of 33,755 Ph.D.s to a near-level pattern of about 31,400 recipients each year over the last decade. The 1985 class of 31,201 recipients continues this even trend. Table A lists the number of recipients from 1960 to 1985. Figure 1 (page 2) shows a quick rise in the first half of this period, followed by a small decline and then a steady plateau in the second half. The plateau hides at least three decade-long changes in the composition of the doctoral cohort: gender make-up, field variability, and citizenship status.

TABLE A Doctorates Awarded by U.S. Universities, 1960-1985

Year	Number	Year	Number	Year	Number
1960	9,733	1969	25,743	1977	31,716
1961	10,413	1970	29,498	1978	30,875
1962	11,500	1971	31,867	1979	31,237
1963	12,728	1972	33,042	1980	31,017
1964	14,325	1973	33,755	1981	31,353
1965	16,340	1974	33,047	1982	31,097
1966	17,949	1975	32,951	1983	31,216
1967	20,403	1976	32,946	1984	31,277
1968	22,936			1985	31,201

Figure 1 Doctorates awarded by U.S. universities, 1960-1985

Men and Women Doctorate Recipients

While the number of doctorate recipients remained roughly the same over the last 10 years, the numbers of men and women earning the degree changed substantially (see Table B, page 3). In 1976, 25,262 of the recipients were men; in 1985, that number declined to 20,502--a decrease of 18.8 percent. Conversely, women doctorate recipients numbered 7,684 in 1976 and grew in number to 10,699 in 1985, an increase of 39.2 percent. During these 10 years, the proportion of men making up the doctoral cohort dropped from 76.7 percent to 65.7 percent, while the proportion of women rose from 23.3 percent to 34.3 percent.

Field Selections

Field changes were also rather striking over the past decade. The steady plateau of degrees camouflaged the shifting distribution among broad fields. The field with the greatest growth, both in number and proportion, was the life sciences, which went from 5,026 Ph.D. degrees earned in 1976 to 5,748 in 1985, an increase of 14.4 percent (see Figure 2, page 4). This field experienced a small decline in the number of male recipients--120, a proportional decrease of 3 percent--counter-weighted by a large increase in women Ph.D.s--842, or 83.1 percent. Other fields that experienced growth were engineering and professional fields: both of these fields declined at mid-decade but demonstrated net growths of 11.7 percent and 8.5 percent, respectively, over the 10-year period. Like life sciences, professional fields saw a decline in the number of male degree earners--113, or 8.2 percent--that was offset by the increase of female Ph.D.s--259, or 77.1 percent.

TABLE B Doctorates Awarded by U.S. Universities, by Broad Field and Sex, 1976-1985

Field	Year of Doctorate									
	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Total All Fields										
Men	25262	23858	22553	22300	21610	21461	21006	20718	20599	20502
Women	7684	7858	8322	8937	9407	9892	10091	10498	10678	10699
Physical Sciences*										
Men	4089	3949	3754	3803	3609	3667	3715	3809	3795	3817
Women	420	430	439	496	502	503	576	617	657	714
Engineering										
Men	2780	2569	2370	2428	2389	2429	2522	2657	2762	2967
Women	54	74	53	62	90	99	124	124	151	198
Life Sciences										
Men	4013	3892	3881	3952	4047	4076	4071	3827	3957	3893
Women	1013	1028	1159	1271	1414	1535	1635	1718	1790	1855
Social Sciences										
Men	4580	4348	4178	3969	3811	3945	3679	3676	3490	3368
Women	1634	1725	1861	1992	2045	2197	2157	2382	2413	2352
Humanities										
Men	3208	2903	2635	2547	2335	2200	2049	1965	1942	1939
Women	1673	1659	1596	1592	1532	1548	1509	1531	1590	1489
Education										
Men	5185	4870	4339	4277	4204	3957	3712	3552	3330	3237
Women	2540	2585	2855	3108	3383	3540	3540	3611	3463	3480
Professional Fields										
Men	1374	1311	1389	1309	1201	1160	1238	1219	1313	1261
Women	336	349	352	408	433	462	546	506	604	595

*Includes mathematics and computer sciences.

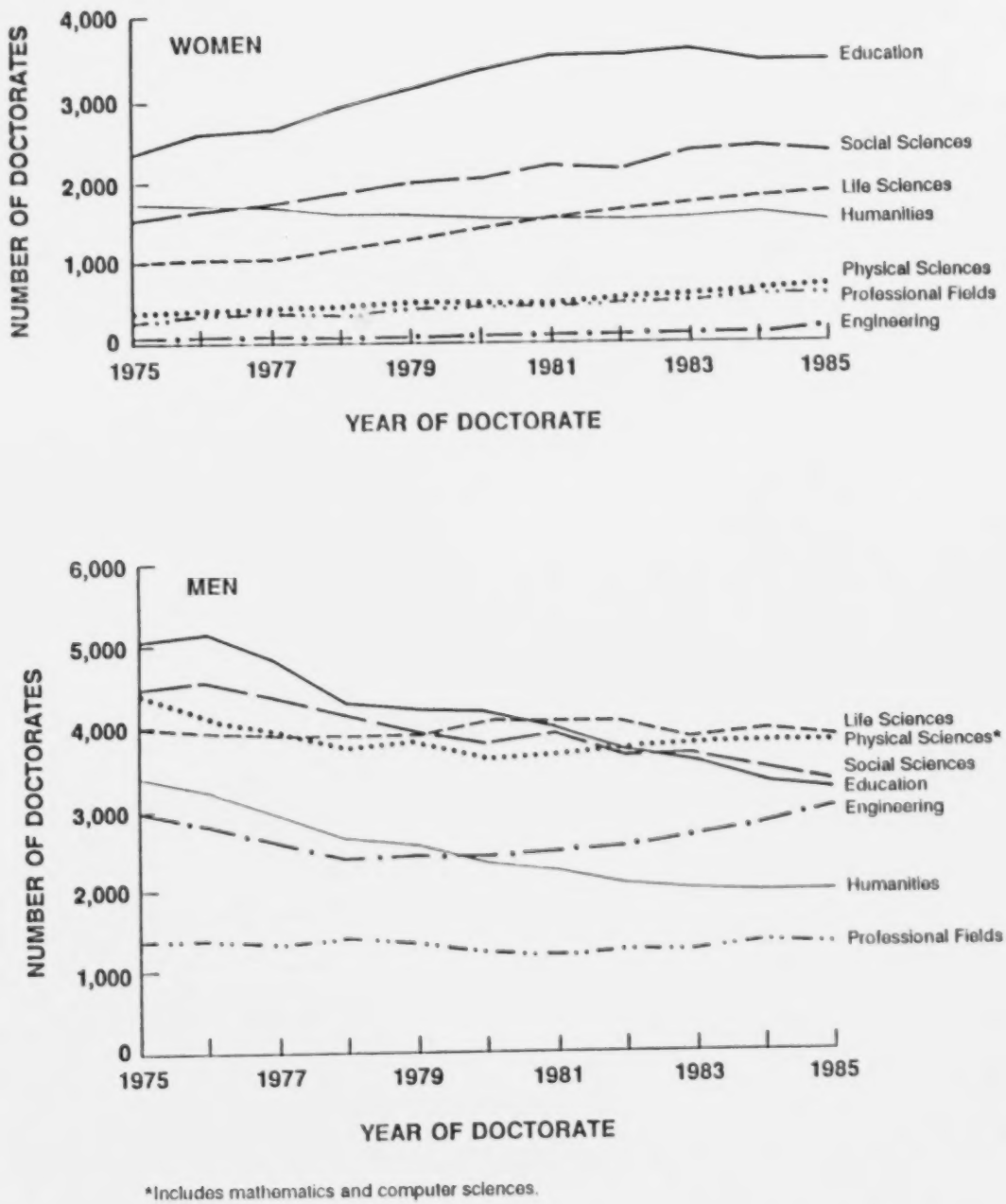

Figure 2 Doctorates awarded by U.S. universities, by broad field and sex, 1975-1985

Engineering was the only field in which both men and women increased their numbers from 1976 to 1985. The number of men increased by 187, and the number of women increased by 144. Although still a small fraction of the Ph.D.s (6.3 percent), women more than tripled their proportion of engineering recipients in the last 10 years.

The greatest decline in doctorates during this period was in the field of humanities, which went from 4,881 doctorates in 1976 to 3,428 in 1985, a loss of 29.8 percent. The number of male humanities doctorates was down from 3,208 to 1,939 recipients--a loss of 39.6 percent--and the number of females was down 11 percent, from 1,673 to 1,489 recipients. The numbers of education doctorates and social scientists were also down--by 13.1 percent and 7.9 percent, respectively. Still, education remained the field with the greatest number of doctorates: despite a steady ebb of male Ph.Ds--from 5,185 in 1976 to 3,237 in 1985, a 37.6 percent decrease--the number of women increased by 37 percent, from 2,540 to 3,480. However, women's peak number in education was achieved in 1983 at 3,611 and appears to be eroding. In social sciences, the decline came from a decrease in male recipients from 4,580 in 1976 to 3,368 in 1985, which was not fully offset by the increase in the number of women from 1,634 to 2,352.

Physical sciences was the one field that appeared stable in overall numbers between the two data points. There were 4,509 recipients in 1976 and 4,531 recipients in 1985. Nonetheless, the similarity in numbers belies a mid-decade dip to 4,111 Ph.D.s. In 1985 a decrease of 272 men recipients was counterbalanced by an increase of 294 women, which changed the gender composition of the field.

Citizenship Status of New Doctorate Recipients

The overall stability in numbers of Ph.D.s produced by U.S. universities also masks a change in the composition of the cohort by citizenship group. Table C (page 6) shows, at five-year intervals, the number and proportion of doctorates earned by U.S. and non-U.S. citizens since 1960. While the number of Ph.D.s was growing from 1960 to the mid-1970s, the proportion of non-U.S. citizens with temporary visas remained substantially the same and the proportion of permanent visa-holders grew only modestly. A period of rapid growth in the proportion of temporary visa-holders took place, however, in the last five years, a period in which the number of Ph.D.s remained steady. In 1985, more than 20 percent of the doctorate graduates were non-U.S. citizens: 16.7 percent of the doctorates were earned by temporary residents, and another 4.2 percent were earned by non-U.S. citizens with permanent visas.

Of the 6,534 foreign nationals earning doctorate degrees at U.S. universities in 1985, 46.3 percent earned degrees in either engineering or physical sciences. The greatest numbers--1,728--were in engineering, where they constituted 54.6 percent of the Ph.D. class. Additionally, 1,296 non-U.S. citizens comprised 28.6 percent of the physical scientists. The bulk of these foreign doctorate earners had temporary visas.

Data gathered on postdoctorate location plans indicated that many non-U.S. citizens would remain in the United States after receiving their degrees. Note that these data are only for those recipients who reported that they had definite plans, either for employment or for postdoctoral study: 83.1 percent of permanent residents and 42.6 percent of temporary visa-holders had definite plans in the U.S. The greatest proportion with definite plans to stay received engineering degrees: 90.0 percent with permanent, and 56.9 percent with temporary, visas.

Finally, it can be noted that the majority of non-U.S. citizens earning doctorates in the United States are men, although the proportion of women is increasing. Women went

TABLE C Percentage Distribution of Doctorate Recipients, by Citizenship and Broad Field, 1960-1985

	Year of Doctorate					
	1960	1965	1970	1975	1980	1985
Total, All Fields						
U.S. Citizens	87.0*	84.3	84.5	82.2	81.3	74.5
Non-U.S., Total	12.1	14.1	14.0	15.9	15.9	20.9
Permanent Visas	2.9	3.4	5.3	5.2	4.2	4.2
Temporary Visas	9.2	10.7	8.7	10.7	11.7	16.7
Physical Sciences						
U.S. Citizens	86.1	83.7	82.2	75.3	74.7	67.3
Non-U.S., Total	13.2	14.8	16.4	22.6	22.9	28.6
Permanent Visas	2.9	3.5	6.3	7.2	6.1	5.1
Temporary Visas	10.3	11.3	10.1	15.4	16.7	23.5
Engineering						
U.S. Citizens	76.4	76.0	73.2	57.2	50.6	40.4
Non-U.S., Total	23.0	22.0	26.2	41.0	46.4	54.6
Permanent Visas	6.8	6.6	12.5	13.9	12.1	10.0
Temporary Visas	16.2	15.4	13.7	27.1	34.3	44.6
Life Sciences						
U.S. Citizens	81.4	76.3	80.2	78.0	80.8	77.1
Non-U.S., Total	18.0	22.6	19.1	19.9	17.3	19.3
Permanent Visas	3.2	3.5	5.2	6.2	4.2	3.3
Temporary Visas	14.7	19.0	13.9	13.7	13.1	16.0
Social Sciences						
U.S. Citizens	87.0	84.9	85.1	85.4	85.2	79.3
Non-U.S., Total	11.9	13.6	13.6	12.5	11.6	15.3
Permanent Visas	3.0	3.6	4.9	3.5	3.3	3.7
Temporary Visas	8.9	10.0	8.7	9.0	8.3	11.6
Humanities						
U.S. Citizens	92.4	90.6	89.6	89.0	87.7	83.1
Non-U.S., Total	5.9	7.5	8.5	8.9	8.8	12.1
Permanent Visas	2.9	2.9	4.7	4.4	3.5	4.4
Temporary Visas	2.9	4.6	3.8	4.5	5.3	7.7
Education						
U.S. Citizens	94.3	93.2	94.6	92.4	89.0	85.5
Non-U.S., Total	5.2	5.3	4.6	6.3	8.2	10.4
Permanent Visas	0.5	0.9	1.2	1.6	1.5	1.9
Temporary Visas	4.6	4.4	3.4	4.7	6.7	8.5
Professional and Other						
U.S. Citizens	87.6	81.5	78.2	82.3	81.2	71.5
Non-U.S., Total	10.8	16.2	18.2	15.3	15.6	21.8
Permanent Visas	0.8	4.3	5.5	5.0	4.0	5.1
Temporary Visas	10.0	11.9	12.7	10.3	11.6	16.7

*Details do not add to 100 percent where citizenship is unknown.

from constituting 12.4 percent of all non-U.S. citizens in 1975 to 17.7 percent in 1985. Among the non-U.S. group, women were a greater proportion of the permanent visa-holders than they were of temporary visa-holders. Women made up 17.3 percent of the permanent resident Ph.D.s in 1975 and 24.4 percent in 1985. Among temporary visa-holders, women earned 10 percent of the degrees in 1975; in 1985, they earned 16 percent.

Country of Citizenship

Table D shows that the biggest group and one of the most rapidly growing cohorts of non-U.S. citizens came from eastern Asia. In 1985, 1,847 eastern Asians earned doctorate degrees from U.S. universities (23.3 percent of the non-U.S. citizens in 1985). The largest subgroup--815--was from Taiwan, and most of these--642--were here on temporary visas. The number of recipients from the African continent increased strongly as well. Conversely, Canadian citizens, who constituted the second largest foreign group in 1960, decreased their proportions of U.S.-educated doctorates: having comprised 13.7 percent of the non-U.S. citizen cohort in 1960, they were but 4.3 percent in 1985.

TABLE D Country of Citizenship of Non-U.S. Recipients, 1960-1985*

	Year of Doctorate					
Country of Citizenship	1960	1965	1970	1975	1980	1985
Total, Non-U.S.	1176	2313	4148	5250	4934	6534
Canada	162	270	533	482	300	286
Mexico/Central America	15	27	41	75	85	149
Cuba and Islands	1	21	47	56	42	52
South America	21	44	189	290	348	340
Europe, Northern	50	119	289	259	198	230
Europe, Central	32	51	122	102	78	145
Europe, Eastern	26	41	88	85	100	134
Europe, Western	21	62	137	183	125	178
Africa, West North	0	2	6	172	226	367
Africa, East North	20	138	145	93	203	259
Africa, South	0	0	1	72	97	127
Africa, Unknown	14	57	134	0	0	0
Asia, Eastern	147	387	928	1143	1025	1847
Asia, Western	201	611	1092	1192	1125	1502
Australasia	55	107	220	217	186	223
Country Unknown	411	376	176	829	796	695

* Appendix Table C lists the countries included in each of the groupings herein.

The distribution of non-U.S. citizens among fields in 1985 can be seen in Table E. Of the recipients from Taiwan, over two-thirds of the temporary visa-holders (and over three-quarters of those with permanent visas) earned their degrees in either physical sciences or engineering. Another large group of Ph.D.s--those from western Asia--tended to concentrate in the same fields. In 1985, the plurality of Canadians studying in the U.S. earned doctorates in the field of education.

TABLE E Country of Citizenship of Non-U.S. Recipients, by Broad Field, 1985*

	Field of Doctorate						
Country of Citizenship	Phys. Sci.	Engi-neering	Life Sci.	Social Sci.	Human.	Educn.	Prof. Fields
Total, Non-U.S.	1296	1728	1111	875	414	698	412
Canada	40	22	46	48	48	57	25
Mexico/Central Am	24	27	55	15	5	20	3
Cuba and Islands	6	7	9	10	4	12	4
South America	75	53	85	40	30	47	10
Europe, Northern	63	14	41	34	37	30	11
Europe, Central	34	16	17	25	40	8	5
Europe, Eastern	47	45	14	12	7	4	5
Europe, Western	29	36	31	30	34	8	10
Africa, West North	35	54	78	62	29	79	30
Africa, East North	33	66	69	40	4	28	19
Africa, South	8	15	28	23	11	31	11
Asia, Eastern	431	664	276	194	67	121	94
Asia, Western	292	512	196	201	38	132	131
Australasia	29	28	54	38	13	48	13
Country Unknown	150	169	112	103	47	73	41

* Appendix Table C lists the countries included in each of the groupings herein.

Postgraduation Employment Commitments

The usual entrants into the U.S. labor force at the time of graduation are U.S. citizens and those non-U.S. citizens who hold permanent visas. Typically, employment choices of new doctorate recipients involve three labor market sectors: academe, industry, and government. "Academe" includes 4-year colleges and universities, junior colleges, and medical schools. "Industry" covers both industry and business, including self-employment. "Government" can mean federal, state, or local government. Finally, a fourth category of "Other" acts as an umbrella for employment with elementary and

secondary schools or with nonprofit organizations, as well as with any other type of employer not listed on the questionnaire.

In 1985, 13,651 new Ph.D.s who were either U.S. citizens or permanent residents reported that they had definite employment plans in the United States. (This number represents 55.6 percent of the combined group, nearly the same as the 1976 proportion of 56.0 percent.) The largest single fraction--48.3 percent--reported that they were joining academe. Industry recruited 20.3 percent of the cohort, and another 11.7 percent intended to enter government employment. Finally, 19.8 percent of the recipients with definite employment plans fell into the category of "Other." This outcome was quite different from a decade ago, when academe was the employer for 60.4 percent of the new recipients (a quarter more than in 1985), and industry was the employer for just 11.7 percent of the Ph.D.s. In one respect the outcome is substantially the same: in 1976, government hired 12.5 percent of the recipients, a minimal difference from 1985's 11.7 percent. Table F (page 10) shows the decade-long changes in commitments to labor market sectors.

The table also shows that the employment plans of men and women were noticeably different from one another over the period. Figure 3 (page 11) displays employment plans by sex in 1976 and again in 1985. Then and now, academe engaged a greater proportion of women, and industry recruited a greater proportion of men. In 1976, 70.4 percent of women and 57.4 percent of men made plans to enter the academic labor sector. In 1985, when fewer new recipients had definite commitments to academe, the gap narrowed but was still appreciable: 52.9 percent of women vs. 45.5 percent of men planned academic employment. Industry was becoming a more likely employment sector over the decade, but the disparity between men's and women's recruitment was still considerable. In 1976, 13.7 percent of men reported plans to go into the business sector, compared with 4.9 percent of women. By 1985, 24.9 percent of men had definite commitments to industry, compared to 12.7 percent of the new women recipients. The 1976 gap between the proportions of men and women going into government had nearly closed by 1985. In 1976, 13.8 percent of men and 8.0 percent of women said they had plans to go into government employment, whereas in 1985, 12.0 percent of men and 11.1 percent of women reported such plans.

Employment plans are re-examined in the special section on women and minorities. That section also looks at field differences in terms of field composition and field selection by minorities and women. Additionally, some of the processes and outcomes of earning the Ph.D. are reviewed: length of time-to-degree, sources of support, and the status of postgraduation plans.

TABLE F Postgraduation Employment Commitments, by Employment Sector and Sex, 1976-1985 (U.S. Citizens and Non-U.S. Citizens with Permanent Visas)

Employment Sector	Year of Doctorate									
	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Academe	60.4	58.8	56.5	54.5	52.0	51.0	49.7	49.8	48.3	48.4
Men	57.4	55.5	53.2	51.3	48.4	47.9	46.1	47.1	45.1	45.5
Women	70.4	68.8	65.6	62.3	59.8	57.4	56.4	54.6	53.6	52.9
Industry	11.7	12.8	15.0	16.7	17.5	18.4	20.7	19.5	19.1	20.3
Men	13.7	15.3	17.8	20.2	20.7	22.4	25.2	23.7	22.9	24.9
Women	4.9	5.5	7.2	8.3	10.4	10.3	12.1	12.2	12.8	12.7
Government	12.5	13.0	12.4	13.0	12.5	12.8	11.2	11.0	12.1	11.7
Men	13.8	14.5	13.7	13.9	14.1	13.7	11.9	12.3	13.5	12.0
Women	8.0	8.5	8.7	10.9	8.9	10.9	9.9	8.7	9.7	11.1
Other	15.4	15.4	16.2	15.8	18.1	17.8	18.4	19.7	20.5	19.8
Men	15.1	14.8	15.3	14.7	16.8	16.0	16.8	17.0	18.5	17.6
Women	16.6	17.2	18.5	18.5	20.8	21.4	21.6	24.5	23.9	23.3

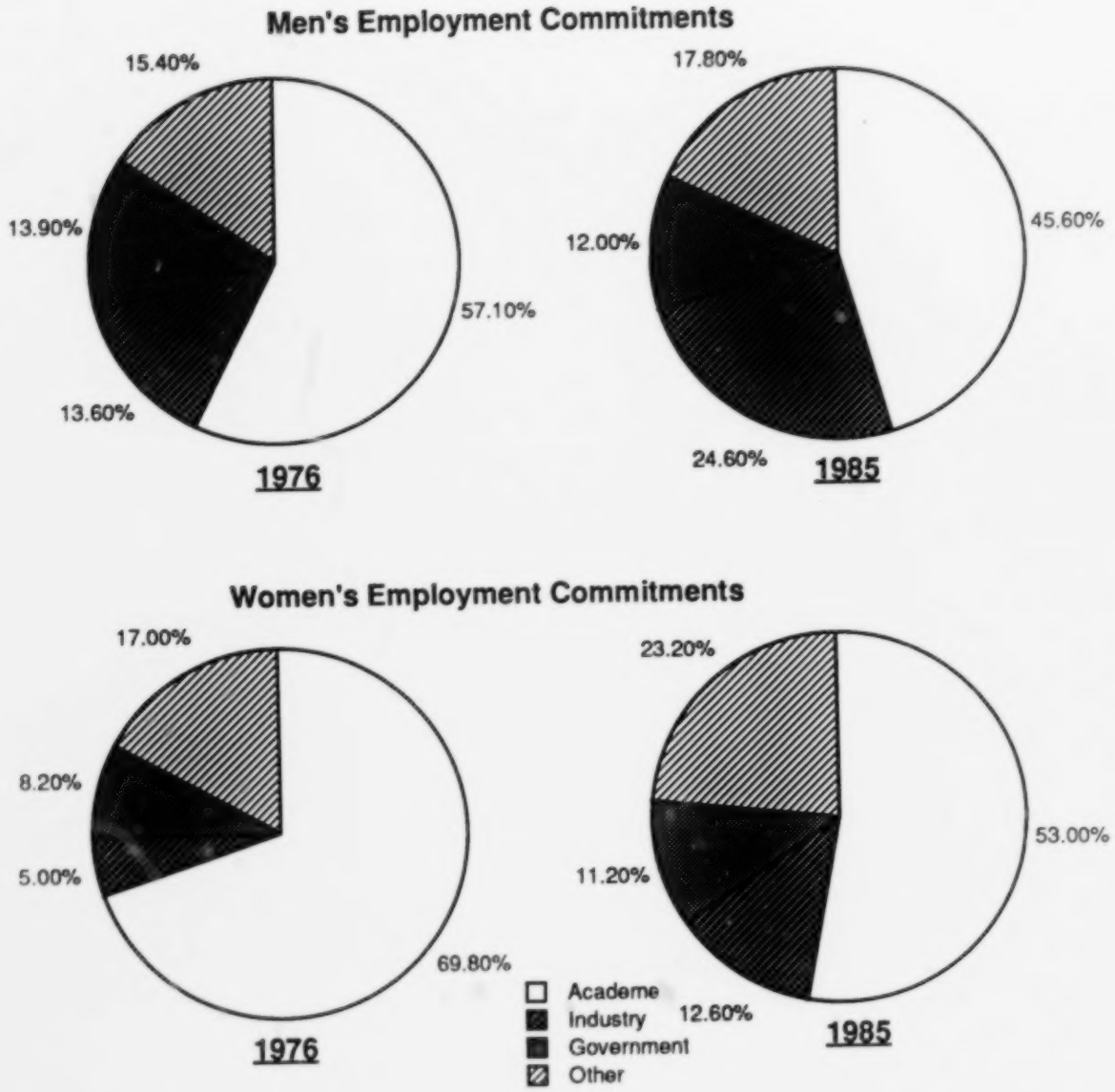

Figure 3 Definite employment commitments of new doctorate recipients, by sex, 1976 and 1985

MINORITY AND WOMEN DOCTORATE RECIPIENTS

This year's special section focuses on American minorities and women. Foreign citizens were excluded because of their typically non-minority status in home countries and the different educational and social climates therein. Data on women have been a part of the Doctorate Records File since its starting point in 1920, but information on minorities has been collected only since 1973. Unfortunately, over a quarter of the 1973 respondents and about 13 percent of the 1974 recipients completed superseded questionnaire forms or provided unusable responses. More reliable data are from 1975 and thereafter, a period in which the racial/ethnic item response rate has been 92-95 percent. For this reason, the span of time between 1975 and 1985 will be used to review patterns in minority degree-earning and, in parallel, in women's doctorate-earning.

Data are reported on five racial/ethnic groups: American Indian or Alaskan Native, Asian or Pacific Islander, Black, White, and Hispanic. Ethnicity takes precedence over race here: if a respondent claims Hispanic heritage, he or she will be reported as Hispanic regardless of racial identification. (Questionnaire items are reproduced on pages 63-64.)

Racial/ethnic groups are distinguishable by certain educational profiles--such as their field selections, support in graduate school, and postgraduation plans--but it is important to note that these profiles do not always describe the women of these groups. Similarly, the overall profile for women doctorate recipients is not fully pertinent to each minority group. To get the sharpest picture, it is useful--where possible--to look at educational patterns separately for women within each racial/ethnic group.

Trends in Proportions Earning Degrees

Data from 1975-1985 on race/ethnicity of U.S. citizens indicate some irregular trends in the proportions of the various groups (see Table G, page 13). Nonetheless, the net change for minorities has been in a slow, positive direction, despite small year-to-year reversals in proportions for some groups. American Indians, Asians, Blacks, and Hispanics earned 6.3 percent of the doctorates in 1975, and together they earned 9.1 percent in 1985. Some of the proportional increase, however, is attributable to the decline of Whites earning doctorate degrees.

The smallest cohort of doctorates with known race/ethnicity has historically been the American Indians. In 1975, American Indians made up 0.1 percent of all U.S. citizens earning the Ph.D. By 1985, they were 0.4 percent, their highest proportion thus far.[1] Asians comprised the next smallest group: 1.3 percent of the new U.S. doctorates in 1975 and 2.3 percent in 1985. They were the only minority group that did not experience any reverse in proportional growth over this period. Hispanics have been somewhat similar to Asians in their numbers and proportions of U.S. degree-earners: they grew from 1.2 percent of the Ph.D.s in 1975 to 2.5 percent in 1985. The largest minority component has been the Black group: they were 3.8 percent of doctorates in 1975 and 4.0 percent in 1985.

[1] The trend for American Indians, however, is quite variable because the numbers are so low. As there have been fewer than 100 American Indian doctorate recipients in any of the years 1975-1985, their proportions will not be discussed at length. The three minority groups to be highlighted in this report will be Asians, Blacks, and Hispanics.

TABLE G Race/Ethnicity of Doctorate Recipients, 1975-1985 (U.S. Citizens)

	Year of Doctorate										
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Total Reporting Race/Ethnicity	25976	26182	25008	23767	23947	23970	24006	23785	23704	23394	22717
American Indian	36 0.1*	40 0.2	65 0.3	60 0.3	81 0.3	75 0.3	85 0.4	77 0.3	80 0.3	73 0.3	93 0.4
Asian	286 1.1	334 1.3	339 1.4	390 1.6	428 1.8	458 1.9	465 1.9	452 1.9	492 2.1	512 2.2	515 2.3
Black	999 3.8	1095 4.2	1116 4.5	1033 4.3	1056 4.4	1032 4.3	1013 4.2	1047 4.4	921 3.9	953 4.1	909 4.0
Hispanic	303 1.2	340 1.3	423 1.7	473 2.0	462 1.9	412 1.7	464 1.9	535 2.2	538 2.3	535 2.3	559 2.5
White	24352 93.7	24373 93.1	23065 92.2	21811 91.8	21920 91.5	21993 91.8	21979 91.6	21674 91.1	21673 91.4	21321 91.1	20641 90.9

*Percent of total U.S. citizenship doctorate recipients reporting racial/ethnic status.

However, Blacks reached their peak (4.5 percent) in 1977 but have lost a bit of ground since then. The decline appears to have slowed, but the trend has not stablilized.

As discussed earlier, the number of all women Ph.D.s increased from 7,201 (21.9 percent) in 1975 to 10,699 (34.3 percent) in 1985, a proportionate increase of 56.6 percent. While the proportion of women increased among all citizenship groups, the group showing the largest growth was U.S. women (see Table H, page 15). In 1975, women made up 23.7 percent of all U.S. citizens receiving Ph.D.s, and in 1985, they were 39.1 percent, a proportionate increase of 65 percent. In part, the proportional increase occurred because the number of male Ph.D.s declined. In 1985, the number of American women doctorates also declined, but at a slower rate than their male counterparts. Most of the U.S. women Ph.D.s in 1985 were White (88.4 percent), followed by Black (6.0 percent), Hispanic (2.9 percent), Asian (2.1 percent), and American Indian (0.6 percent).

The proportion of U.S. women differed within the different ethnic or racial cohorts. Each minority female subgroup grew in its proportion of total doctorates earned, and all women increased their percentages within the subgroups. Setting aside the variable American Indian group, Asian women constituted the smallest share of doctorates earned by U.S. citizens. Nonetheless, Asian women showed some growth during the 1975-1985 period, going from 0.2 percent of the total in 1975 to 0.8 percent in 1985. Black women also enlarged their share of Ph.D.s, earning 1.3 percent in 1975 and 2.3 percent in 1985. Hispanic women increased their proportions from 0.2 percent of the total in 1975 to 1.1 percent in 1985. White women comprised the largest share, earning 22.0 percent of the Ph.D.s conferred to U.S. citizens in 1975 and 34.7 percent in 1985.

Table H also shows the growth in the proportion of women within each ethnic group over time. Asian women, 22.4 percent of the U.S. Asian group in 1975, increased their proportion to 36.3 percent in 1985. Black women earned more than half of the doctorate degrees awarded to Black Americans in 1985: they grew from 34.9 percent within-group in 1975 to 58.4 percent in 1985. Hispanic women approached the half-way mark in their within-group growth during the period. In 1975, they made up 20.1 percent of the doctorates earned by Hispanics; by 1985 they were 46.7 percent. White women comprised the smallest within-group proportion of doctorates, 23.5 percent in 1975 and 38.2 percent in 1985.

Field Composition

The U.S. minority composition within each of the seven broad fields in 1975 and 1985 is depicted in Figure 4 (page 16). Minorities increased their participation in every field. Their smallest presence was in physical sciences, despite their growth from 3.5 percent in 1975 to 5.9 percent in 1985. Minorities made the greatest contribution in the field of education, where they formed 13.5 percent of the degree-earners, up from 11.4 percent in 1975. The largest presence of Asian Americans was in engineering (7.4 percent), the largest of Blacks was in education (8.4 percent), and the largest of Hispanics was in humanities (3.5 percent).

These proportions do not necessarily reflect the field selection rankings by members of each minority group. Table I (page 17) compares the field distribution of all U.S. citizen doctorates with that of minority recipients in 1975 and 1985. Among all U.S. recipients with known race in 1985, the most frequently chosen field was education (25.0 percent), followed by social sciences (19.5 percent), life sciences (19.1 percent), physical sciences (13.0 percent), humanities (12.2 percent), professional fields (5.8 percent), and engineering (5.4 percent). These proportions were quite similar (within one percentage point) to the 1975 proportions, with two exceptions: at 19.1 percent, life sciences was more frequently selected (up from 14.6 percent), and humanities at 12.2 percent became less often selected (down from 16.4 percent). More than a third of the recipients chose natural sciences and engineering as their field of Ph.D.

TABLE H Women as a Proportion of Doctorate Recipients, by Race, 1975-1985 (U.S. Citizens)

	Year of Doctorate										
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Women U.S. Citizen Ph.D.s	6419	6842	6964	7355	7884	8346	8701	8828	9220	9285	9083
Proportion of U.S. Ph.D.s	23.7	25.1	26.7	29.1	31.0	33.1	34.7	36.2	37.9	38.7	39.1
Women with Known Race/Ethnicity	6199	6631	6709	6956	7460	8005	8403	8648	9043	9109	8924
Proportion of U.S. Ph.D.s	23.9	25.3	26.8	29.3	31.2	33.4	35.0	36.4	38.1	38.9	39.3
American Indian Women	9	9	22	10	25	29	29	33	30	20	54
Proportion of U.S. Ph.D.s	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2
Proportion within-group	25.0	22.5	30.8	16.7	30.9	38.7	34.1	42.9	37.5	27.4	58.1
Asian Women	64	90	88	103	117	145	150	171	180	174	187
Proportion of U.S. Ph.D.s	0.2	0.3	0.4	0.4	0.5	0.6	0.6	0.7	0.8	0.7	0.8
Proportion within-group	22.4	26.9	26.0	26.4	27.3	31.7	32.3	37.8	36.6	34.0	36.3
Black Women	349	443	432	449	505	533	514	564	509	526	531
Proportion of U.S. Ph.D.s	1.3	1.7	1.7	1.9	2.1	2.2	2.1	2.3	2.1	2.2	2.3
Proportion within-group	34.9	40.5	38.7	43.5	47.8	51.6	50.7	53.9	55.3	55.2	58.4
Hispanic Women	61	87	113	156	154	156	189	191	250	222	261
Proportion of U.S. Ph.D.s	0.2	0.3	0.5	0.7	0.6	0.7	0.8	0.8	1.1	0.9	1.1
Proportion within-group	20.1	25.6	26.7	33.0	33.3	37.9	40.7	35.7	46.5	41.5	46.7
White Women	5716	6002	6054	6238	6659	7145	7521	7689	8074	8167	7891
Proportion of U.S. Ph.D.s	22.0	22.9	24.2	26.2	27.8	29.8	31.3	32.3	34.1	34.9	34.7
Proportion within-group	23.5	24.6	26.2	28.6	30.4	32.5	34.2	35.5	37.3	38.3	38.2

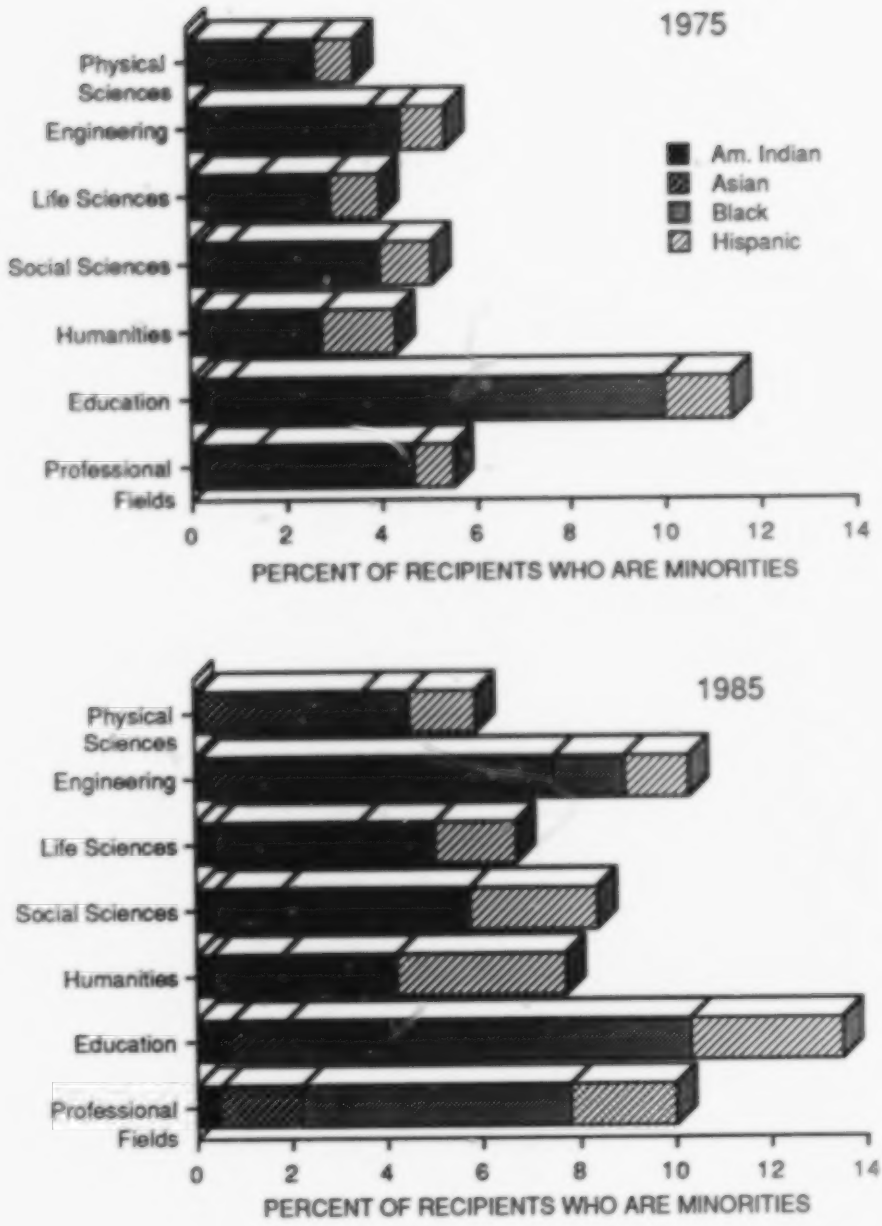

Figure 4 Field composition, by minorities, 1975 and 1985 (U.S. citizens)

TABLE I Field Selection of Minority Ph.D.s, 1975 and 1985 (U.S. Citizens)

	Total U.S.		Asians		Blacks		Hispanics	
	1975	1985	1975	1985	1975	1985	1975	1985
Physical Sciences	13.4	13.0	17.5	19.4	4.1	3.3	8.9	7.5
Engineering	6.3	5.4	21.3	17.5	1.1	2.1	5.0	2.9
Life Sciences	14.6	19.1	18.9	24.9	5.6	7.7	12.9	13.4
Social Sciences	19.0	19.5	12.6	12.0	15.3	19.1	18.5	21.6
Humanities	16.4	12.2	10.5	8.3	8.7	7.3	21.1	17.2
Education	25.4	25.0	13.6	13.4	61.0	52.3	30.4	32.2
Professional Fields	4.9	5.8	5.6	4.5	4.2	8.1	3.3	5.2
Total*	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

*Details may not add to 100% because of rounding.

In contrast, Asian Americans tended to cluster in engineering and the natural sciences (similar to the clustering displayed by their non-U.S. counterparts). Their biggest shifts occurred between engineering and life sciences: in 1975 they selected engineering more often than other fields (21.3 percent), and in 1985 they chose life sciences more frequently (24.9 percent). Hispanics were somewhat less likely, and Blacks were quite a bit less likely, to enter the natural sciences and engineering than the "average" American Ph.D., but they were more likely to cluster in education. Over 50 percent of the Blacks received degrees in education, although the field's popularity among Black recipients eroded somewhat in the 1975-1985 period. Conversely, Hispanics' share of degrees in education was somewhat greater in 1985 than in 1975. Hispanics and Blacks followed the upward trends among all Americans in social sciences, life sciences, and professional fields.

The proportion of women in each of the seven major fields is depicted in Figure 5, and the proportion of minority women is displayed in Figure 6. (Both figures are on page 18.) Women's field selections are shown in Table J (page 19). For three of the four women's subgroups in 1985--Blacks, Hispanics, and Whites--the greatest numbers of doctorates were earned in education. Asian women were the only subgroup to vary from this pattern: the largest single fraction of Asian American women earned degrees in life sciences.

These proportionate field selections did not always reflect the proportionate presence of women in a field. For example, the largest number of Asian women (49 of 187) were in life sciences in 1985. However, their biggest proportionate share of the whole American Ph.D. cohort was slightly larger in engineering (1.1 percent) than in life sciences. For the other three subgroups, the clustering in education did correspond with the field in which their presence was highest. Of the 531 Black women who earned Ph.D.s in 1985, most--318--were in education; they comprised 5.6 percent of the degree recipients in that field. The largest fraction of Hispanic women, 98 out of 261, earned degrees in education, where they garnered 1.7 percent of the doctorates conferred in 1985. Like Black and Hispanic women, White women clustered in education, earning their largest number of degrees (2,595 of 7,891) and their highest share (45.8 percent) of all degrees awarded to U.S. citizens.

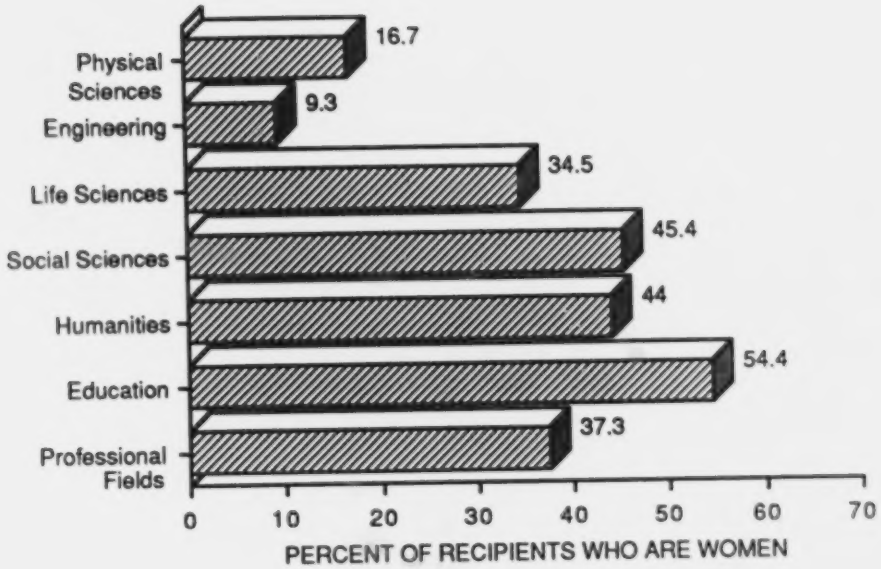

Figure 5 Field composition, by women Ph.D.s, 1985 (U.S. citizens)

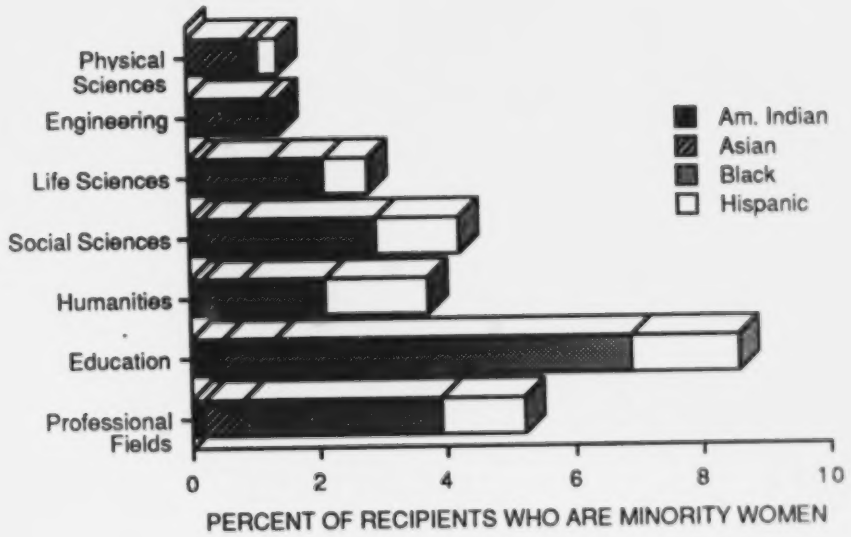

Figure 6 Field composition, by minority women, 1985 (U.S. citizens)

TABLE J Field Selection of Women Doctorate Recipients, 1975 and 1985 (U.S. Citizens)

	Total U.S. Citizens*		Total U.S. Women*		Asian Women		Black Women		Hispanic Women		White Women	
	1975	1985	1975	1985	1975	1985	1975	1985	1975	1985	1975	1985
Physical Sciences	3,476	2,947	277	493	4	26	5	5	2	10	266	452
	13.4	13.0	4.4	5.5	6.3	13.9	1.4	1.6	3.3	3.8	4.7	5.7
Engineering	1,641	1,223	32	114	1	14	0	3	0	0	31	97
	6.3	5.4	0.5	1.3	1.6	7.5	0.0	0.6	0.0	0.0	0.5	1.2
Life Sciences	3,801	4,338	816	1,497	21	49	19	33	5	32	770	1,374
	14.6	19.1	13.2	16.8	32.8	26.2	5.4	6.2	8.2	12.2	13.5	17.4
Social Sciences	4,935	4,432	1,326	2,017	10	28	47	95	9	59	1,258	1,826
	19.0	19.5	21.4	22.6	15.6	15.0	13.5	17.9	14.8	22.6	22.0	23.1
Humanities	4,249	2,780	1,450	1,224	13	17	27	36	24	45	1,384	1,120
	16.4	12.2	23.4	13.7	20.3	9.1	7.7	6.8	39.3	17.2	24.2	14.2
Education	6,603	5,668	2,086	3,083	12	45	233	318	20	98	1,818	2,595
	25.4	25.0	33.7	34.5	18.8	24.1	66.8	59.9	32.8	37.6	31.8	32.9
Professional Fields	1,271	1,329	212	496	3	8	18	41	1	17	189	427
	4.9	5.8	3.4	5.6	4.7	4.3	5.2	7.7	1.7	6.5	3.3	5.4
Total	25,976	22,717	6,199	8,924	64	187	349	531	61	261	5,716	7,891
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

*With known race/ethnicity.

Median Time-to-Degree

The process of attaining the Ph.D. differs by racial/ethnic group and by gender, but the differences weaken when field data are examined. During the 1975-1985 period, the total time elapsed between year of baccalaureate and year of doctorate steadily increased. For U.S. citizens, the median time rose from 8.7 years to 10.5 years. In 1975, Whites had the lowest median time-to-degree: 8.6 years. They were followed by Hispanics (9.2 years), Asians (10.3 years), and Blacks (12.4 years). By 1985, Asians had reduced their time-to-degree and completed their doctorates more quickly than the others--9.7 years. Median time had increased for all other groups--Whites completed in 10.4 years, Hispanics in 11.8, and Blacks in 14.4.

Figure 7 depicts the trends in time-to-degree, by race, for U.S. citizens. The time line for Whites shows a generally smooth rise upward. The trends are somewhat irregular but upward for Blacks and Hispanics. For Asians, however, the trend is quite variable. In recent years Asians had the shortest time-lapse, but this trend has not stabilized.

The initial impression from survey data has been that women take more time than men to complete the Ph.D.; the strength of this impression, however, is diluted by examination of field data. In 1975, the median time-lapse for male U.S. citizens was 8.4 years, whereas for women it was 9.5 years. By 1985, men were taking a median 9.6 years to complete the doctorate, and women were taking 12.3 years.

Figure 8 (page 21) displays the difference in time-to-degree by all men and women and by minority men and women, 1975 to 1985. In the first part of the period, women took about 1.5 years longer than men to complete their Ph.D.s. In the 1980s, the gap widened to 2.0, then 2.5 years. By 1985 men and women were apart by 2.7 years. The gap was most apparent and widening between White men and women doctorate recipients. The gap was not as pronounced for Black and Hispanic Ph.D.s, although the women still lagged the men. Again, the Asians presented a quite variable picture, with Asian women having shorter times-to-degree than their male counterparts in 4 of the 11 years.

Figure 7 Median years to degree, by minority status, 1975-1985 (U.S. citizens)

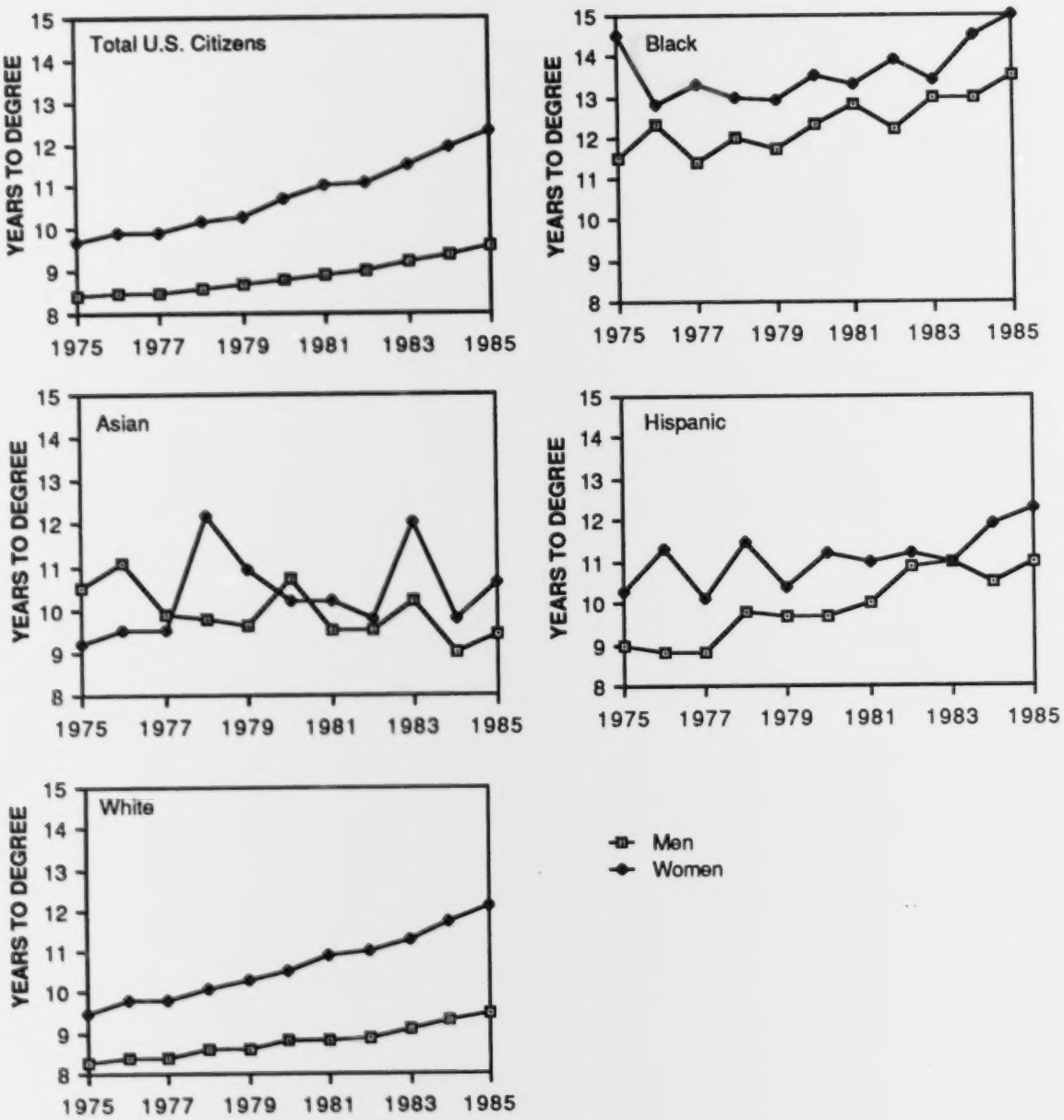

Figure 8 Median years to degree, by sex and race, 1975-1985 (U.S. citizens)

Time-to-degree appeared to be related to field choice. Table K (pages 22-23) displays time-lapse for each of the seven broad fields (labelled "Field" in the table) and for those subfields in which 2 percent or more of the new doctorates earned their degrees. When time-lapse data were disaggregated by field, considerable variation appeared. For

TABLE K Median Years to Degree, by Field, Sex, and Minority Status, 1985 (U.S. Citizens)

	Total All Fields	Field: Physical Sciences	Physics/ Astron.	Chemistry	Math	Field: Engi-neering	Field: Life Sciences	Biolog. Sciences	Health Sciences	Agric. Sciences
All U.S.	10.5	6.8	7.1	6.0	7.2	7.5	8.1	7.7	12.5	8.0
Men	9.6	6.8	7.1	6.0	7.2	7.6	7.8	7.6	10.9	8.0
Women	12.3	6.8	7.1	6.0	7.1	6.4	9.0	8.1	13.5	8.1
Asians	9.7	7.4	8.5	7.1	8.0	7.9	8.2	7.7	13.5	*
Men	9.4	7.5	9.0	7.3	8.0	8.3	7.9	7.6	*	*
Women	10.6	7.1	*	6.9	*	5.5	8.4	7.9	*	*
Blacks	14.4	8.5	*	6.8	*	8.8	9.3	8.8	14.0	*
Men	13.5	10.0	*	7.8	*	8.5	8.9	8.5	*	*
Women	15.0	*	*	*	*	*	11.0	9.0	14.5	*
Hispanics	11.8	7.2	7.0	6.0	*	8.2	8.0	7.6	14.0	8.0
Men	10.9	7.2	6.3	6.3	*	8.2	7.8	7.4	*	*
Women	12.3	7.0	*	*	*	*	8.2	7.8	*	*
Whites	10.4	6.7	7.1	5.9	7.2	7.5	8.1	7.7	12.5	7.9
Men	9.5	6.7	7.1	5.9	7.2	7.6	7.7	7.5	10.9	7.9
Women	12.1	6.8	7.1	5.9	7.2	6.5	9.1	8.2	13.5	7.9

	Field: Social Sciences	Psychol.	Econom.	Anthro. & Socio.	Field: Human-ities	Eng.&Am. Lang&Lit	Field: Edu-cation	Field: Profess. Fields	Business & Mgmt.
All U.S.	9.9	9.4	8.1	11.4	11.8	12.1	15.5	13.7	12.9
Men	9.8	9.4	8.2	11.0	11.4	11.2	15.1	13.3	12,8
Women	10.1	9.4	8.0	12.2	12.5	12.9	16.0	14.4	13.1
Asians	10.2	8.5	*	*	13.8	*	17.1	15.0	12.5
Men	11.5	10.8	*	*	15.8	*	15.8	15.3	*
Women	8.8	7.8	*	*	13.1	*	21.5	*	*
Blacks	10.8	10.0	*	12.3	15.1	16.7	17.1	14.2	*
Men	11.0	10.4	*	11.8	13.3	*	17.1	14.2	*
Women	10.6	9.8	*	13.0	15.5	*	17.1	14.2	*
Hispanics	9.6	9.5	9.1	10.0	12.6	*	14.3	15.7	*
Men	9.5	9.7	9.2	8.8	11.4	*	14.4	16.3	*
Women	9.7	9.3	*	10.4	14.5	*	14.2	14.5	*
Whites	9.9	9.4	8.0	11.4	11.7	11.9	15.4	13.5	12.8
Men	9.7	9.4	8.1	10.9	11.4	11.1	15.0	13.1	12.7
Women	10.1	9.5	8.0	12.2	12.2	12.6	15.9	14.3	13.1

* The median is not reported because N was fewer than 10.

example, in 1985 physical science doctorates were earned in the least amount of time, a median 6.8 years, and education degrees took the longest to obtain, 15.5 years. Asians had the shortest time-to-degree, but they were concentrated in the fields which have relatively short time-lapses. Conversely, Blacks, Hispanics, and most women clustered in education, where time-to-degree was lengthiest.

Table K shows how the 1985 gap in time-lapse narrowed, both between men and women and between minorities and the total, when data were examined by field. Rather than having a 2.7 year lag, women completed their doctorates more quickly than men in engineering, at the same pace in physical sciences, and between 0.3 and 1.2 years more slowly than men in all other fields. Asian Americans, who appeared to earn their Ph.D.s most quickly, are shown to be no faster than the average U.S. citizen when looked at by field. Hispanics, who had a 1.3 year gap from the average, closed the gap in all but one field and completed degrees more quickly than the average in three of the seven broad fields. The gap for Blacks--3.9 years--was also greatly reduced when each field was looked at separately: the variance was reduced to about 1.5 years.

Sources of Support

Sources of support through graduate school may be a factor in differences in time-to-degree. A greater proportion of women than men reported their reliance on personal income--their own or their family's--as their primary means of graduate school support; in fact, the majority of women Ph.D.s said they did (52.2 percent). Moreover, a greater proportion of Blacks depended on personal sources than any other group; again, a majority did (53.5 percent). A majority of Asians (51.3 percent) reported primary support from university-related sources. These differences were partly the artifacts of field choice: as discussed above, women and Blacks tended to cluster in fields such as education, where there was little R&D funding, and Asians tended to concentrate in the natural sciences and engineering, where a greater funding pool existed. But when the data were disaggregated by field, differences in support were still apparent between the sexes and the races.

Table L (page 25) shows the differences between men and women, by field, in their primary sources of support.[2] The sexes had the greatest support differences in the fields of engineering and life sciences. Women in 1985 received proportionately more university-related support and relied less on personal income in engineering than in any other field, and this was the one field in which they completed their degrees more quickly than men. In life sciences, women were more likely to rely on personal sources and less likely to receive university support than men, and this was the field where the sexes' time-to-degree was most disparate, with women lagging men by 1.2 years. The type of support even within source categories was also somewhat variable. Typically, university-related support is offered through research assistantships or teaching assistantships. Based on primary work activities of employed scientists, research assistantships apparently would be an appropriate avenue for professional socialization, as most scientists and engineers work in the area of Research, Development, and Design.[3] Again looking at life scientists, not only did more men receive university-related contributions, but also about 10 percent more men received research assistantships than did women (33.3 percent vs. 23.2 percent).

Similarly for the racial/ethnic groups, comparisons of graduate school support by field demonstrate disparities. Table M (page 26) shows that 40.7 percent of all American recipients reported university-related support as their primary source of support through

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[2] The differences in sources of support are not shown by field for minority women because of small cell counts in many fields.

[3] Betty D. Maxfield and Mary Belisle, *Science, Engineering, and Humanities Doctorates in the United States: 1983 Profile*, Tables 2-9 and 2-10, National Academy Press: Washington, D.C., 1985.

TABLE L Primary Sources of Support, by Field and Sex, 1985 (U.S. Citizens)

Source	Total Fields	Physical Sciences	Engi-neering	Life Sciences	Social Sciences	Human-ities	Education	Professional and Other
Own/Family								
Men	39.6*	13.7	23.3	20.8	47.4	44.6	77.0	60.6
Women	52.2	15.3	17.4	27.4	46.0	46.5	77.2	57.1
University								
Men	45.7	76.8	61.0	55.1	35.5	45.4	12.4	28.2
Women	33.0	72.8	68.8	45.1	35.2	46.3	13.7	28.2
Federal								
Men	8.9	6.3	8.4	21.2	8.0	4.2	3.6	4.2
Women	7.9	8.0	5.5	24.1	8.9	2.2	2.0	5.4
Loans								
Men	0.7	0.5	0.0	1.0	7.2	2.9	3.6	2.9
Women	0.8	0.2	0.0	1.4	7.6	2.8	4.4	5.6
Business/Industry								
Men	2.7	1.3	5.5	0.7	0.7	1.0	2.8	2.5
Women	4.2	1.8	2.8	1.0	0.3	0.5	1.5	1.1
Nat'l Fellowship								
Men	1.7	0.9	1.4	0.8	0.7	0.8	0.1	0.4
Women	1.0	1.3	4.6	0.5	1.4	1.2	0.3	0.5
Other								
Men	0.6	0.5	0.5	0.4	0.4	1.0	0.6	1.2
Women	0.8	0.7	0.9	0.5	0.6	0.6	1.0	2.1

*Percentage with known primary source of support.

TABLE M Primary Sources of Support, by Field and Minority Status, 1985 (U.S. Citizens)

Source	Total Fields	Physical Sciences	Engi-neering	Life Sciences	Social Sciences	Human-ities	Education	Professional and Other
Own/Family	44.6*	13.9	22.7	23.1	46.8	45.4	77.1	59.3
Asian	30.4	13.8	17.6	21.1	35.1	42.9	69.4	40.0
Black	53.5	12.5	27.8	27.4	38.1	28.3	70.9	45.2
Hispanic	40.4	17.5	18.8	17.2	40.8	35.1	61.7	44.4
University	40.7	76.1	61.7	51.6	35.4	45.8	13.1	28.2
Asian	51.3	77.5	68.9	48.6	38.6	45.7	19.3	40.0
Black	25.2	66.7	38.9	40.3	29.3	47.2	15.3	27.4
Hispanic	33.3	67.5	62.5	46.9	25.5	45.9	14.2	25.9
Federal	8.5	6.6	8.1	22.2	8.4	3.3	2.7	4.7
Asian	10.8	5.0	2.7	27.5	10.5	2.9	3.2	10.0
Black	11.2	12.5	22.2	29.0	19.0	9.4	4.6	16.1
Hispanic	14.8	5.0	12.5	31.3	14.3	2.7	16.3	18.5
Loans	3.3	0.4	0.0	1.2	7.4	2.8	4.0	3.9
Asian	2.5	0.0	0.0	0.0	8.8	2.9	6.5	5.0
Black	5.1	0.0	0.0	0.0	4.8	3.8	6.6	6.5
Hispanic	5.2	0.0	0.0	1.6	11.2	4.1	5.7	3.7
Business/Industry	1.4	1.4	5.2	0.8	0.5	0.7	2.1	2.0
Asian	2.9	2.5	6.6	1.8	3.5	0.0	1.6	5.0
Black	1.4	4.2	5.6	1.6	0.7	1.9	1.5	0.0
Hispanic	1.5	2.5	6.3	1.6	0.0	1.4	2.1	0.0
Nat'l Fellowship	0.8	1.0	1.7	0.7	1.0	1.0	0.2	0.4
Asian	0.9	1.3	2.7	0.0	1.8	0.0	0.0	0.0
Black	2.7	4.2	5.6	1.6	8.2	5.7	0.5	1.6
Hispanic	4.1	5.0	0.0	1.6	8.2	8.1	0.0	7.4
Other	0.7	0.5	0.5	0.5	0.5	0.8	0.8	1.5
Asian	1.1	0.0	1.4	0.9	1.8	5.7	0.0	0.0
Black	0.9	0.0	0.0	0.0	0.0	3.8	0.7	0.3
Hispanic	0.7	2.5	0.0	0.0	0.0	2.7	0.0	0.0

* Percentage of all U.S. citizens with known primary source of support.

graduate school. In contrast, 51.3 percent of Asian Americans reported such support, and they completed their degrees in the shortest amount of time. And while 44.6 percent of all recipients reported primary reliance on personal sources of support, only 30.4 percent of Asians did so. Conversely, the Black group, who completed their Ph.D.s over the longest period of time, had fewer members who reported institutional contributions as their primary source of support (25.2 percent) but more who indicated that they were supported by personal sources (53.5 percent).

Blacks had the lowest proportion of university-related support in the science and engineering fields. For example, 76.1 percent of all recipients in physical sciences indicated that the university was their primary source of support, but fewer Blacks so indicated--66.7 percent. Research assistantships in physical science fields were a primary support mechanism for 61.1 percent of university-supported recipients; however, they were awarded to far fewer of the Black physical scientists--31.3 percent. In contrast with the median 6.8 years to degree for all physical scientists, the median time-lapse for Blacks was 8.5 years.

This suggests that differential sources of support through graduate school may be a factor in differences in time-to-degree by gender and race. To look at this question, Table N compares time-lapse data of recipients whose primary source of support was personal

TABLE N Median Time-to-Degree, by Primary Source of Support, Field, Race, and Sex, 1985 (U.S. Citizens)

	Total	Asian	Black	Hispanic	White	Men	Women
All Fields							
Personal	14.1	14.8	17.1	14.2	13.9	13.2	15.3
University	8.0	8.1	11.0	9.0	7.9	7.6	9.0
Physical Sciences							
Personal	9.4	10.0	*	*	9.2	9.1	11.6
University	6.5	7.1	6.5	7.3	6.5	6.5	6.3
Engineering							
Personal	10.6	10.0	*	*	10.7	10.8	8.9
University	6.6	7.3	*	7.5	6.6	6.7	6.2
Life Sciences							
Personal	10.8	14.0	14.0	12.8	10.7	9.6	13.1
University	7.7	7.8	8.8	7.3	7.7	7.6	8.2
Social Sciences							
Personal	11.8	11.5	13.6	11.8	11.7	11.2	12.7
University	8.3	9.0	8.6	8.9	8.2	8.2	8.3
Humanities							
Personal	13.7	20.5	15.8	16.5	13.6	13.0	14.8
University	10.2	12.3	14.0	11.8	10.1	9.9	10.4
Education							
Personal	16.3	17.5	18.9	14.9	16.2	15.7	16.8
University	12.4	15.0	13.8	12.5	12.2	11.7	12.9
Professional Fields							
Personal	15.0	*	16.9	17.5	14.7	14.2	16.8
University	10.5	*	11.0	*	10.4	10.3	10.9

*The median is not reported because N was fewer than 10.

with those whose primary source was institutional, i.e., university-related; data are shown for each of the seven broad fields and each racial and gender group. An overall difference of 6.1 years in time-lapse appears between those Ph.D.s who relied primarily on their own or family resources and those Ph.D.s who received institutional support through the university. The size of the gap varied but was substantially the same for men, women, Asians, Blacks, Hispanics, and Whites (the range of difference was from 5.2 to 6.7 years).

In comparing the two types of primary support groups, some interesting data appear for men and women. Time-to-degree patterns of those receiving university-related support tended to converge: with the exception of education, time-lapses in all fields differed by a matter of months. But for those relying primarily on personal sources of income for their graduate school support, time-lapses diverged again: with the exception of engineers, women lagged men by 1.1 to 3.5 years. Among the racial groups, time-to-degree patterns for Ph.D.s supported by university contributions were similar in the sciences and engineering but began to vary outside those fields. When personal income was the primary source of support, the variance increased.

Status of Postgraduation Plans

After the Ph.D. was obtained, differences between the races and between the sexes did not disappear. Outcomes also varied, such as the status of postgraduation plans and commitments to employment sectors. The "status" of plans refers to the certainty of such plans: respondents indicated either that they made a *definite* commitment, or were *negotiating* with one or more specific organizations, or were *seeking* a position. In the 1975-1985 period, about three-quarters of U.S. citizen Ph.D.s had definite postdoctorate plans, either for employment or for postdoctorate study. The low over this period was 73 percent; the high was 76 percent. This generally level trend masks differences by field, ethnicity, and sex. Trends by field over the 1975-1985 period show that the greatest percentage of new doctorates with definite plans received their degrees in professional fields, where the range was 81.5-86.2 percent. Humanities had the smallest proportion of new graduates with definite study or employment plans: 60-65 percent. Lying in between were engineering (range, 79.0-85.1 percent), physical sciences (76.4-83.1 percent), life sciences (74.1-79.0 percent), education (71.4-75.3 percent), and social sciences (68.5-75.8 percent). Although the ranges are small, solid prospects for recipients in life sciences and social sciences seem to be diminishing.

As depicted in Figure 9 (page 29), trends in postgraduation plans for minorities have been more erratic than the trend for Whites. In the early part of the period, Hispanics had slightly higher proportions of new doctorate recipients with definite plans than did the other groups; by 1977, however, all three minority groups had proportionately fewer members with definite status than did Whites. Asians tended to have the lowest such proportion, followed by Blacks and then Hispanics. To examine whether the rates were related to field choice, data were disaggregated by broad fields for 1985.

Table O (pages 30-31) displays the proportions and shows that in all fields but humanities the cohort of White doctorate recipients had more members with definite plans than did any other group. It was often the case that members of an ethnic group that had high rates of definite plans upon graduating from a given field also showed little clustering in that field, and vice versa. For example, Blacks had the highest proportion with definite postgraduation plans in humanities, yet humanities was a less popular field selection for Blacks than for any other ethnic group (see Table I, page 17). What is more, Hispanics had the lowest proportion of group members with definite plans in education and professional fields, but education was the most frequent field choice of Hispanics in 1985. Similarly, Asians trailed the other ethnic groups in having definite plans following the

receipt of the doctorate in engineering and in life and social sciences, yet life sciences was the field most frequently chosen by Asian recipients in 1985.

The differences in postgraduation plan status were not only found between the races: the sexes, too, showed disparity in plan status. The overall difference--about 6 or 7 percent more men than women had definite plans--was somewhat mitigated when data were looked at separately by field. Figure 10 (pages 32-33) shows that the gap narrowed in two fields, and in the instance of engineering was reversed. However, differences in certainty of plans persisted in some fields, with women having fewer definite plans.

Repeated for women was the phenomenon observed among minority groups-- that the less populated field choices had the highest proportion of recipients with definite plans. For example, engineering was the least frequently selected field by women in 1985, yet the highest proportion of women who had definite plans when they finished their degrees were engineers (83.8 percent). The second most popular field for women--social sciences--had the second lowest proportion with definite plans (66.1 percent).

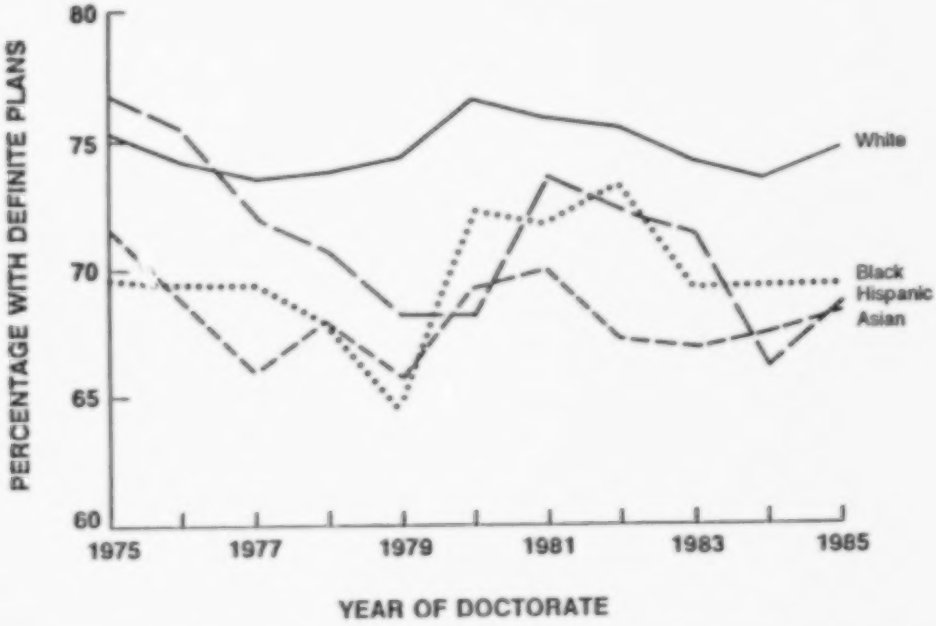

Figure 9 Percentage of new doctorates with definite postgraduation commitments, by race, 1975-1985 (U.S. citizens)

TABLE O Status of Postgraduation Plans, by Field, Sex, and Race, 1985 (U.S. Citizens)

	Total Fields	Physical Sciences	Engi-neering	Life Sciences	Social Sciences	Human-ities	Education	Profession & Other
Total U.S.								
Definite	74.1	79.0	80.0	75.5	69.7	64.7	75.0	83.0
Study	15.7	29.7	8.0	44.2	10.6	3.3	1.8	1.5
Employment	58.4	49.4	72.0	31.3	59.2	61.3	73.3	81.6
Negotiating	7.7	8.0	10.8	8.2	9.2	6.4	6.5	5.2
Study	1.7	3.2	1.3	4.1	1.6	0.4	0.3	0.2
Employment	6.0	4.8	9.6	4.2	7.6	6.0	6.2	5.1
Seeking	18.2	12.9	9.2	16.2	21.1	28.9	18.4	11.8
Study	3.4	5.1	1.3	7.4	3.6	2.3	1.1	0.5
Employment	14.8	7.9	7.9	8.9	17.5	26.6	17.3	11.3
Men								
Definite	76.7	79.7	79.6	76.1	72.7	66.7	79.3	88.2
Study	17.8	30.3	7.3	44.8	10.5	3.6	1.5	1.2
Employment	58.9	49.4	72.3	31.3	62.2	63.0	77.8	87.0
Negotiating	97.3	8.0	11.1	7.6	8.6	5.8	5.7	3.8
Study	1.8	3.1	1.3	3.8	1.5	0.5	0.2	0.0
Employment	5.5	4.8	9.8	3.8	7.1	5.4	5.5	3.8
Seeking	16.0	12.4	9.3	16.3	18.7	27.5	15.0	8.0
Study	3.5	5.2	1.3	7.5	3.1	2.2	0.7	0.4
Employment	12.4	7.2	8.0	8.8	15.6	25.3	14.3	7.6
Women								
Definite	70.1	76.0	83.8	74.5	66.1	62.2	71.4	74.3
Study	12.5	26.5	14.4	43.1	10.6	3.0	2.0	1.8
Employment	57.6	49.5	69.4	31.4	55.5	59.2	69.5	72.5
Negotiating	8.3	8.3	8.1	9.5	9.9	7.1	7.2	7.6
Study	1.6	3.7	0.9	4.6	1.7	0.4	0.4	0.4
Employment	6.7	4.6	7.2	4.9	8.2	6.7	6.8	7.2
Seeking	21.7	15.7	8.1	16.0	23.9	30.7	21.4	18.1
Study	3.3	4.3	0.9	7.0	4.2	2.5	1.4	0.6
Employment	18.4	11.4	7.2	9.0	19.7	28.2	20.0	17.5

Asians								
Definite	68.3	72.9	69.0	67.7	57.6	67.4	69.7	75.0
Study	21.2	28.1	6.0	51.2	10.2	0.0	3.0	0.0
Employment	47.1	44.8	63.1	16.5	47.5	67.4	66.7	75.0
Negotiating	9.3	4.2	15.5	11.0	10.2	4.7	6.1	15.0
Study	2.2	1.0	0.0	7.9	0.0	0.0	0.0	0.0
Employment	7.1	3.1	15.5	3.1	10.2	4.7	6.1	15.0
Seeking	22.4	22.9	15.5	21.3	32.2	27.9	24.2	10.0
Study	8.3	13.5	1.2	13.4	10.2	4.7	3.0	0.0
Employment	14.1	9.4	14.3	7.9	22.0	23.3	21.2	10.0
Blacks								
Definite	69.3	58.6	70.6	74.6	59.9	83.3	69.5	78.3
Study	6.0	13.8	0.0	26.9	6.6	6.7	2.2	7.2
Employment	63.3	44.8	70.6	47.8	53.3	76.7	67.3	71.0
Negotiating	7.6	17.2	29.4	7.5	10.8	1.7	6.8	1.4
Study	0.6	10.3	0.0	3.0	0.0	0.0	0.0	0.0
Employment	7.1	6.9	29.4	4.5	10.8	1.7	6.8	1.4
Seeking	23.0	24.1	0.0	17.9	29.3	15.0	23.7	20.3
Study	2.2	3.4	0.0	4.5	4.8	1.7	1.3	0.0
Employment	20.8	20.7	0.0	13.4	24.6	13.3	22.4	20.3
Hispanics								
Definite	68.3	78.6	75.0	70.7	66.4	65.2	67.2	67.9
Study	10.7	16.7	6.3	41.3	6.0	8.7	2.3	0.0
Employment	57.6	61.9	68.8	29.3	60.3	56.5	64.9	67.9
Negotiating	9.0	11.9	25.0	8.0	12.9	5.4	6.3	10.7
Study	1.7	2.4	0.0	4.0	2.6	0.0	0.6	3.6
Employment	7.4	9.5	25.0	4.0	10.3	5.4	5.7	7.1
Seeking	22.7	9.5	0.0	21.3	20.7	29.3	26.4	21.4
Study	3.9	0.0	0.0	8.0	2.6	6.5	3.4	0.0
Employment	18.8	9.5	0.0	13.3	18.1	22.8	23.0	21.4
Whites								
Definite	74.6	79.6	81.1	75.9	70.3	64.2	75.9	83.9
Study	16.2	30.1	8.3	44.3	10.9	3.1	1.6	1.2
Employment	58.4	49.4	72.7	31.6	59.5	61.0	74.3	82.7
Negotiating	7.6	8.0	10.0	8.1	9.0	6.6	6.5	5.2
Study	1.7	3.2	1.4	4.0	1.7	0.4	0.3	0.1
Employment	5.9	4.7	8.6	4.2	7.4	6.1	6.2	5.1
Seeking	17.8	12.5	9.0	15.9	20.6	29.3	17.6	11.0
Study	3.4	4.8	1.3	7.2	3.5	2.2	1.0	0.5
Employment	14.4	7.6	7.7	8.7	17.2	27.1	16.6	10.4

*Details may not add to 100% because of rounding.

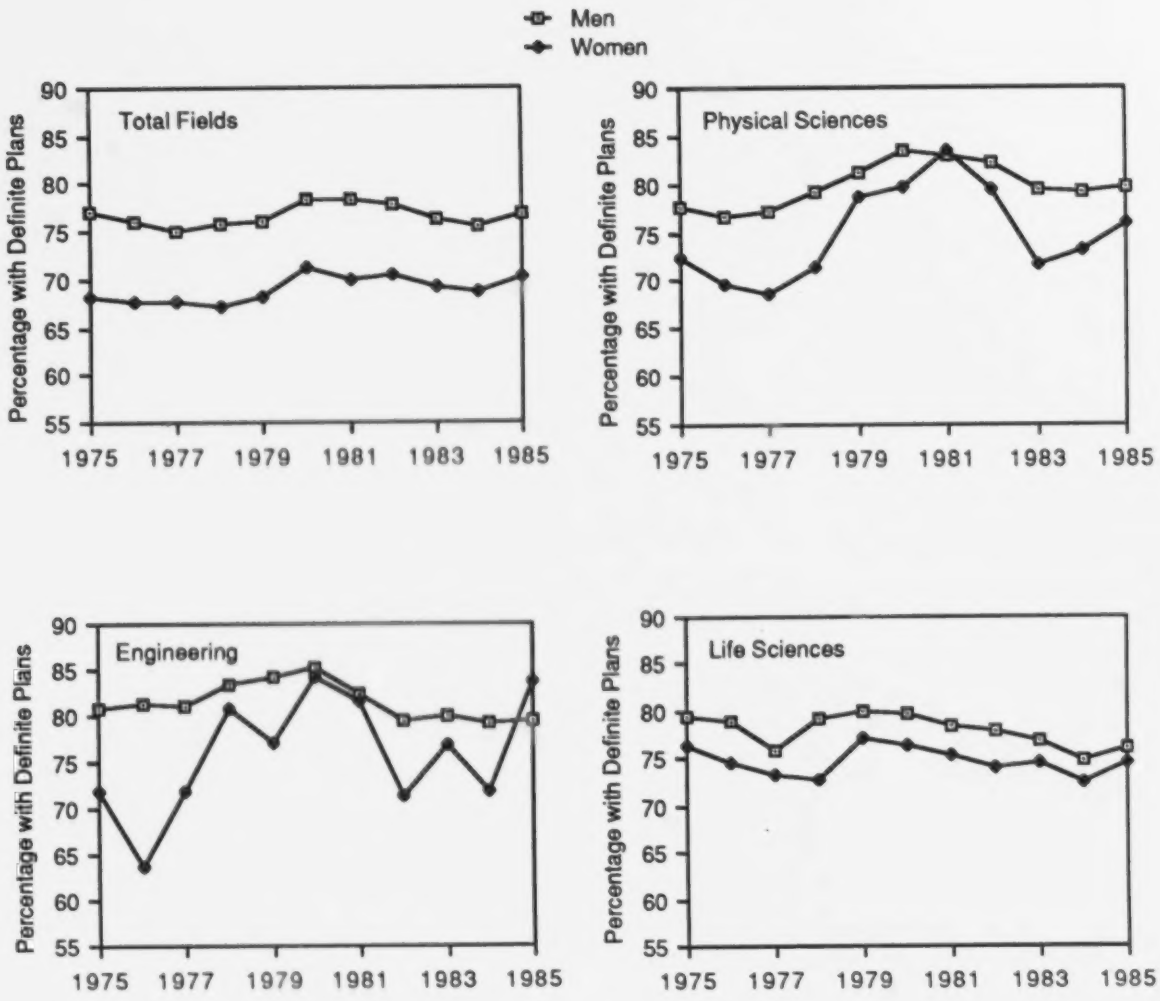

Figure 10 Percentage of new doctorates with definite postgraduation commitments, by sex and field, 1975-1985 (U.S. citizens)

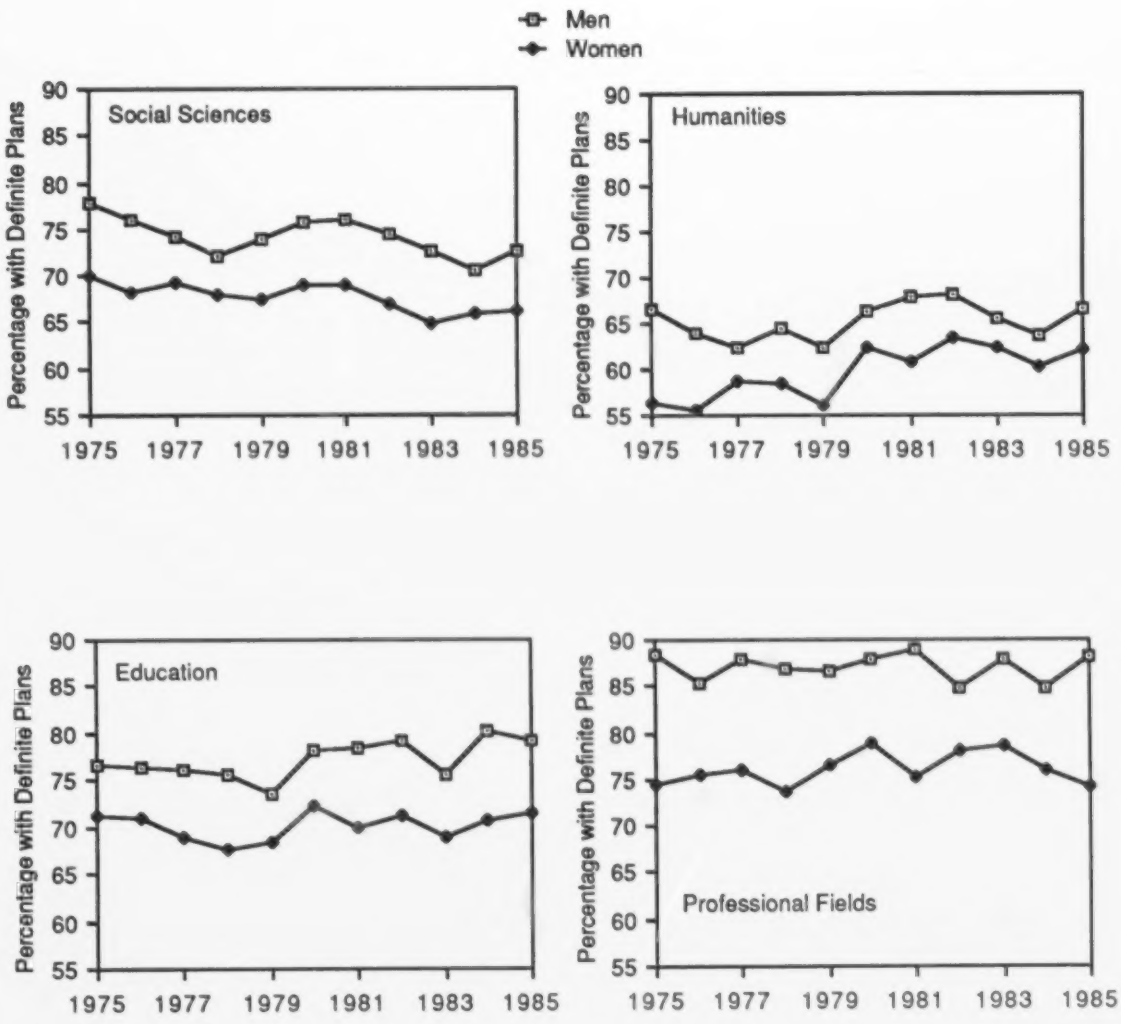

Figure 10 (continued) .

Employment Commitments

As discussed on page 8, the three major employment sectors that attract new Ph.D. recipients are academe, industry, and government. For U.S. citizens, the distribution among these sectors and the fourth category (Other) is quite similar to the distribution among U.S. citizens and non-U.S. citizens with permanent visas, described on pages 8-9. However, substantial variation appeared when the data were disaggregated by race and sex or by field. (See Tables P, below, and Q, page 35.)

The decline of academe as an employer of new doctorates coincided with the increase in new recipients joining industry or Other. The reduction of academic placements was most apparent in women's employment, especially White women's employment. In 1975, 70.9 percent of women who had definite work commitments in the U.S. intended to join academe. By 1985, the proportion had dropped over 18 points to 52.5 percent, with 7.9 percent being added to industry, 2.6 percent to government, and 7.9 percent to Other. Moreover, the reduction of academic jobs was very strongly seen in Black men's employment commitments: their proportion going to academe in 1975 had been 66.6 percent, but in 1985 it was 42.2 percent.

The sector with the largest proportionate increase of employment commitments was industry. Every group except Hispanic women increased its share going to the business sector. This was especially true among Asians, both for men and for women. The proportion of Asian men with definite commitments to industry rose from 28.0 percent in 1975 to 43.9 percent in 1985, again at the expense of both academic jobs and government

TABLE P Postgraduation Employment Commitments, by Employment Sector, Sex, and Minority Status, 1975 and 1985 (U.S. Citizens)

	Academe		Industry		Government		Other	
	1975	1985	1975	1985	1975	1985	1975	1985
Total U.S. Citizens	60.6*	48.1	11.5	19.4	13.1	12.1	14.8	20.4
Men	57.8	45.4	13.5	23.7	14.3	12.5	14.5	18.3
Women	70.9	52.5	4.6	12.5	8.7	11.3	15.8	23.7
Asian	50.7	39.9	23.3	37.2	16.0	12.1	10.0	10.8
Men	48.0	37.2	28.0	43.9	15.2	9.5	8.8	9.5
Women	64.0	45.3	0.0	24.0	20.0	17.3	16.0	13.3
Black	67.6	49.6	2.5	6.0	11.9	13.9	18.0	30.4
Men	66.6	42.2	3.4	9.2	11.7	19.7	18.3	28.9
Women	69.4	54.6	0.9	4.0	12.2	10.1	17.6	31.4
Hispanic	70.7	56.7	10.6	11.4	8.1	11.1	10.6	20.8
Men	70.7	55.6	11.0	14.8	7.3	8.6	11.0	21.0
Women	70.6	57.9	8.8	7.6	11.8	13.8	8.8	20.7
White	60.3	48.0	11.8	19.9	13.2	12.0	14.7	20.1
Men	57.4	45.5	13.7	23.9	14.5	12.5	14.4	18.1
Women	71.1	52.2	4.9	13.2	8.3	11.2	15.7	23.4

* Proportion of those with definite employment commitments.

TABLE Q Postgraduation Employment Commitments, by Field of Ph.D., 1975 and 1985 (U.S. Citizens)

	Academe		Industry		Government		Other	
	1975	1985	1975	1985	1975	1985	1975	1985
Physical Sciences	41.4*	32.5	38.2	53.9	17.4	11.5	2.9	2.1
Engineering	27.1	27.3	45.3	53.6	25.1	16.8	2.5	2.3
Life Sciences	59.0	54.2	15.3	25.5	18.7	14.4	7.0	5.9
Social Sciences	65.9	45.4	5.8	16.6	16.5	16.7	11.7	21.3
Humanities	85.6	76.3	2.3	6.4	3.4	3.3	8.6	14.0
Education	55.7	40.6	2.5	7.6	11.1	12.3	30.7	39.5
Professional Flds	78.2	70.9	6.4	9.5	5.5	7.1	9.8	12.5

* Proportion of those with definite employment commitments.

employment. The proportion of Asian women going to industry went from zero in 1975 to 24.0 percent and was drawn from all other types of sectoral commitments. White men also increased their proportion of business commitments to a sizable extent, rising from 13.7 percent in 1975 to 23.9 percent in 1985.

Despite a small reduction in the share of those having definite plans to work for government--from 13.1 percent in 1975 to 12.1 percent in 1985--some groups made more commitments to government over the period. Hispanics, Black men, and White women all raised their proportions. The category of Other also absorbed some of the commitments lost from academe.

Table Q shows that the shifts in U.S. employment sectors had varying impacts by field. The reduction of academic employment was felt in every field but engineering. The field hardest hit was social sciences, where new recipients' commitments to academe were down by 20.5 percentage points over the 1975-1985 period. Most of these Ph.D.s realigned with industry, going from 5.8 percent to 16.6 percent with business commitments. New doctorate recipients in humanities, education, and physical sciences also had far fewer definite commitments to academe.

The field whose recipients had the greatest increase in work commitments to industry was physical sciences. In 1985, 53.9 percent of physical science Ph.Ds. planned to go into business, surpassing even the engineers in the percentage of new doctorates with such commitments.

Summary

American women and minorities have made gains in their proportions among the new cohorts since 1975, the first year with reliable racial data. Some of the increase was due to the reduction in numbers of White men attaining the degree.

There was sometimes strong diversity between the sexes and among the racial/ethnic groups. Field composition and selection varied among the subgroups. The lowest proportion of minorities in 1985 was in physical sciences (5.9 percent); the largest was in education (13.5 percent). Asians tended to select engineering and the natural sciences over other fields. Hispanics, Blacks, and most of the women's subgroups tended to cluster in education.

Diversity was also apparent in median times-to-degree, with women and minorities experiencing a longer time-lapse between receipt of their baccalaureate and doctorate

degrees. However, when field was held constant, the gap in time-to-degree diminished and in some cases was reversed.

Differences among the subgroups were observed in sources of graduate school support, which almost certainly is a factor in the time-lapse diversity. Minorities and women had different sources of support than the non-minority and male candidates. This was particularly true for Blacks, who had the lowest proportion of university-related support in science and engineering. When disaggregated by field, the differences in support tapered but did not disappear. Regardless of field, the persons who relied primarily on personal sources of support took much longer to complete their degrees than did recipients who reported university contributions as their primary source of support.

In terms of status of their postgraduation plans, a greater proportion of Whites had definite plans for postdoctoral study or employment than did Asians, Blacks, or Hispanics. This outcome continued even when field was held constant, except in the case of humanities. In addition, a larger share of men than women had definite plans; again, this disparity narrowed but persisted when data were disaggregated by field.

When the employment sector of those with definite commitments was examined, a decline in academic employment over the 1975-1985 period was noted. Moreover, industry attracted a greater proportion of new recipients. Diminishing proportions of Ph.D.s with commitments to academe were seen most strongly among Black men and all women. Increasing proportions going to industry were observed especially among Asian men and women.

APPENDIXES

APPENDIX A: The Five Basic Tables

Table titles and headings are generally self-explanatory, but a few terms need special definition or explanation. The survey questionnaire is reproduced on pages 63-64.

Table 1	Number of Doctorate Recipients by Sex and Subfield, 1985
Table 1A	Number of Doctorate Recipients by Citizenship, Racial/Ethnic Group, and Subfield, 1985
Table 2	Statistical Profile of Doctorate Recipients by Field of Doctorate, 1985
Table 3	Sources of Support in Graduate School of Doctorate Recipients by Sex and Summary Field, 1985
Table 4	State of Doctoral Institution of Doctorate Recipients by Sex and Summary Field, 1985
Table 5	Statistical Profile of Doctorate Recipients by Racial/Ethnic Group and U.S. Citizenship Status, 1985

Tables 1 and 1A: These tables display 1985 data by subfield of doctorate, corresponding to the fields specified in the Specialties List on page 65. The "general" field categories--e.g., "chemistry, general"--contain individuals who either received the doctorate in the general subject area or did not indicate a particular specialty field. The "other" field categories--e.g., "chemistry, other"--include individuals whose specified doctoral discipline was not included among the specialty fields.

Table 2: There are three two-page tables: one contains data about all doctorate recipients in 1985 and the other two present data by sex. Refer to the inside of the back cover of this report for the codes included in each broad field and to the Specialties List on page 65 for the codes and names of each subfield. Definitions are as follows:

- *Median Age at Doctorate*: One-half received the doctorate at or before this age.
- *Percentage with Master's*: The percentage of doctorate recipients in a field who received a master's degree in any field before earning the doctorate.
- *Median Time Lapse*: "Total Time" refers to total calendar time elapsed between the year of baccalaureate and the year of doctorate; "Registered Time" refers to the total time registered in a university between baccalaureate and doctorate.

Each year's doctorate recipients provide information on postgraduation employment or study plans in response to items 20 and 21 on the survey form. Since the questionnaire is filled out at about the time the doctorate is received, these planned activities can be subject to change. However, comparisons with data from the longitudinal Survey of Doctorate Recipients have shown these data to be a reasonable predictor of actual employment status in the year following the doctorate.[4] Postgraduation plans of the doctorate recipients are grouped as follows: "Postdoctoral Study Plans" (fellowship, research associateship, traineeship, other), "Planned Employment" (educational institution, industry, etc.), or "Postdoctoral Status Unknown." The sum of these lines totals 100 percent for each column, with allowance for rounding: for example, 45.5 percent of all chemists had postdoctoral study plans, 47.4 percent planned to be employed, and 7.1 percent did not report their postgraduation plans; these total 100.0 percent. The study and employment rows are further subdivided--showing that 19.5 percent of all the chemists planned to pursue postdoctoral fellowships; 24.6 percent, research associateships; 0.6 percent, traineeships; and 0.8 percent, some other form of postdoctoral study. The employment row is similarly subdivided; the percentages, listed by type of employer (educational institution, industry, etc.), total 47.4 percent planning employment.

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[4]See discussion on page 22 of the 1982 *Summary Report* and also *A Century of Doctorates: Data Analyses of Growth and Change* (Washington, D.C.: National Academy of Sciences, 1978, pp. 92-93).

The four lines of data beginning with "Definite Postdoctoral Study" distinguish between individuals who have definite postgraduation plans (item 19: "Am returning to, or continuing in, predoctoral employment" or "Have signed contract or made definite commitment") and those who are still seeking employment or postdoctoral study (item 19: "Am negotiating with one or more specific organizations," "Am seeking position but have no specific prospects," or "Other"). These four lines, when added to the prior line, "Postdoctoral Status Unknown," total 100 percent with allowance for rounding. The two lines "Definite Postdoctoral Study" and "Seeking Postdoctoral Study" add to give the percentage having "Postdoctoral Study Plans," and the two lines, "Definite Employment" and "Seeking Employment," add to give the percentage having "Planned Employment After Doctorate."

Percentages showing the distribution of doctorate recipients by work activity and by region of employment are based on those who have a definite employment commitment. They exclude those still seeking employment and those planning postdoctoral study as described above.

Table 3: Displayed in Table 3 are data reported from item 17 on all sources of financial support during the course of individuals' graduate education. The data in the table should be interpreted as follows: 147 male doctorate recipients in the physical sciences reported financial support from National Science Foundation fellowships during graduate school. This number is 4.1 percent of the male physical sciences doctorates who answered the question, and it is 37.4 percent of the males in all fields who reported NSF fellowship support. Since students indicate multiple sources of support, the vertical percentages sum to more than 100 percent.

Table 4: This table shows the number of persons receiving a doctorate from universities in each of the 50 states, the District of Columbia, and Puerto Rico.

Table 5: Table 5 contains data by racial/ethnic group (first included in the 1973 *Summary Report*) and by U.S. citizenship status for selected variables from Tables 2 and 3.

In 1977 the item on racial/ethnic group in the survey questionnaire was revised to coincide with the question format recommended by the Federal Interagency Committee on Education and adopted by the Office of Management and Budget (OMB) for use in federally sponsored surveys; an explanation of the effect of these changes is detailed on page 13 of the 1977 *Summary Report*. Changes in the OMB guidelines prompted the moving of persons having origins in the Indian subcontinent from the White category to Asian in 1978. In 1980 two survey revisions were made: (1) the category Hispanic was subdivided into Puerto Rican, Mexican American, and Other Hispanic to provide more detail for users of the racial/ethnic data and (2) respondents were asked to check only one ethnic category. Prior to 1980, doctorate recipients could check more than one category to indicate their racial/ethnic background. However, when the data were compiled, all persons who checked Asian, American Indian, or Hispanic and also checked "White" were included in the minority-group category; and those whose responses were "Black" as well as any other category were designated as "Black."

Beginning with the 1982 survey, this item was revised to separate questions on racial and ethnic groups. Respondents are first asked to check one of the four racial group categories (American Indian, Asian, Black, or White) and then to indicate Hispanic heritage. For purposes of analysis all respondents who indicated Hispanic heritage, regardless of racial identification, are included in one of three Hispanic groups. The remaining survey respondents are then counted in the respective racial groups.

TABLE 1 Number of Doctorate Recipients by Sex and Subfield, 1985

Subfield of Doctorate	Number of Doctorates		
	Men	Women	Total
TOTAL ALL FIELDS	**20502**	**10699**	**31201**
PHYSICAL SCIENCES	**3817**	**714**	**4531**
MATHEMATICS	583	106	689
Applied Mathematics	98	19	117
Algebra	49	6	55
Analysis and Functional Analysis	73	10	83
Geometry	33	2	35
Logic	26	4	30
Number Theory	16	2	18
Probability and Math Statistics	118	32	150
Topology	31	4	35
Computing Theory and Practice	14	1	15
Operations Research	16	6	22
Mathematics, General	73	12	85
Mathematics, Other	36	8	44
COMPUTER SCIENCE	278	33	311
Computer Sciences	230	20	250
Information Sciences and Systems	48	13	61
PHYSICS AND ASTRONOMY	976	102	1078
Astronomy	38	5	43
Astrophysics	51	6	57
Acoustics	7	3	10
Atomic and Molecular	52	6	58
Electron	3	1	4
Elementary Particles	146	8	154
Fluids	15	1	16
Nuclear Structure	79	7	86
Optics	41	9	50
Plasma	52	3	55
Polymer	8	3	11
Solid State	229	19	248
Physics, General	166	10	176
Physics, Other	89	21	110
CHEMISTRY	1474	362	1836
Analytical	223	62	285
Inorganic	204	47	251
Nuclear	6	1	7
Organic	414	79	493
Pharmaceutical	45	15	60
Physical	234	70	304
Polymer	70	14	84
Theoretical	41	7	48
Chemistry, General	169	45	214
Chemistry, Other	68	22	90
EARTH, ATMOSPHERIC AND MARINE SCI	506	111	617
Atmospheric Physics and Chemistry	15	1	16
Atmospheric Dynamics	20	1	21
Meteorology	20	2	22
Atmos and Meteorological Sci, Gen	10		10
Atmos and Meteorological Sci, Other	10		10
Geology	90	21	111
Geochemistry	37	11	48
Geophysics and Seismology	78	13	91
Paleontology	18	5	23
Mineralogy, Petrology	18	10	28
Stratigraphy, Sedimentation	18	5	23
Geomorphology and Glacial Geology	12	1	13
Applied Geology	8		8
Geological Sciences, General	6	5	11
Geological Sciences, Other	8	3	11
Environmental Sciences	36	6	42
Hydrology and Water Resources	16	1	17
Oceanography	47	21	68
Marine Sciences	22	2	24
Physical Sciences, Other	17	3	20
ENGINEERING	**2967**	**198**	**3165**
Aerospace, Aeronaut & Astronaut	119	5	124
Agricultural	57	3	60
Bioengineering and Biomedical	58	11	69
Ceramic	19		19
Chemical	405	35	440
Civil	339	18	357
Communications	28	2	30
Computer	51	5	56
Electrical, Electronics	603	28	631
Engineering Mechanics	84	4	88
Engineering Physics	11	1	12
Engineering Science	31		31
Environmental Health Engineering	31	2	33
Industrial	86	6	92
Materials Science	165	23	188
Mechanical	402	22	424
Metallurgical	87	9	96
Mining and Mineral	16		16
Naval Architecture, Marine Eng	8		8
Nuclear	93	3	96
Ocean	25		25
Operations Research	46	8	54
Petroleum	24		24
Polymer	34	6	40
Systems Engineering	53	4	57
Engineering, General	26		26
Engineering, Other	66	3	69
LIFE SCIENCES	**3893**	**1855**	**5748**
BIOLOGICAL SCIENCES	2537	1229	3766
Biochemistry	395	184	579
Biophysics	62	7	69
Bacteriology	13	4	17
Plant Genetics	23	8	31
Plant Pathology	30	8	38
Plant Physiology	46	12	58
Botany, Other	86	34	120
Anatomy	89	44	133
Biometrics and Biostatistics	28	12	40
Cell Biology	61	39	100
Ecology	148	52	200
Embryology	10	5	15
Endocrinology	13	4	17
Entomology	139	34	173
Immunology	68	53	121
Molecular Biology	182	95	277
Microbiology	174	113	287
Neurosciences	98	58	156
Nutritional Sciences	41	72	113
Parasitology	19	2	21
Toxicology	74	24	98
Human and Animal Genetics	56	49	105
Human and Animal Pathology	74	34	108
Human and Animal Pharmacology	155	74	229
Human and Animal Physiology	171	68	239
Zoology, Other	101	46	147
Biological Sciences, General	129	62	191
Biological Sciences, Other	52	32	84
HEALTH SCIENCES	290	434	724
Audiology and Speech Pathology	39	60	99
Environmental Health	18	13	31
Public Health	45	57	102
Epidemiology	28	48	76
Nursing	7	170	177
Pharmacy	78	28	106
Veterinary Medicine	34	17	51
Health Sciences, General	9	5	14
Health Sciences, Other	32	36	68
AGRICULTURAL SCIENCES	1066	192	1258
Agricultural Economics	126	21	147
Animal Breeding and Genetics	20	8	28
Animal Nutrition	65	13	78
Animal Sciences, Other	82	13	95
Agronomy	139	19	158
Plant Breeding and Genetics	74	14	88
Plant Pathology	65	24	89
Plant Sciences, Other	18	3	21
Food Sciences	103	33	136
Soil Sciences	90	7	97
Horticulture Science	65	11	76
Fisheries Science	31	5	36
Wildlife Management	37	1	38
Forestry Science	90	15	105
Agriculture, General	5		5
Agriculture, Other	56	5	61

TABLE 1 (Continued)

Subfield of Doctorate	Number of Doctorates		
	Men	Women	Total
SOCIAL SCIENCES (INCL PSYCH)	**3368**	**2352**	**5720**
Anthropology	172	181	353
Area Studies	14	5	19
Criminology	28	10	38
Demography	15	9	24
Economics	663	122	785
Econometrics	25	2	27
Geography	91	29	120
International Relations	62	16	78
Political Science and Government	299	108	407
Public Policy Studies	46	24	70
Sociology	227	234	461
Statistics	46	14	60
Urban Studies	55	21	76
Social Sciences, General	10	8	18
Social Sciences, Other	59	50	109
PSYCHOLOGY	1556	1519	3075
Clinical	580	580	1160
Cognitive	53	23	76
Comparative	9	2	11
Counseling	217	212	429
Developmental	63	113	176
Experimental	100	65	165
Educational	49	78	127
Industrial and Organizational	71	28	99
Personality	12	9	21
Physiological	44	35	79
Psychometrics	7	3	10
Quantitative	12	4	16
School	38	54	92
Social	73	93	166
Psychology, General	136	122	258
Psychology, Other	92	98	190
HUMANITIES	**1939**	**1489**	**3428**
History, American	126	49	175
History, European	86	56	142
History of Science	21	2	23
History, General	57	30	87
History, Other	75	41	116
Classics	26	18	44
Comparative Literature	53	80	133
Linguistics	85	91	176
Speech and Debate	21	17	38
Letters, General	5	8	13
Letters, Other	11	15	26
American Studies	45	42	87
Archeology	15	9	24
Art History and Criticism	41	96	137
Music	307	140	447
Philosophy	196	42	238
Religion	148	33	181
Theatre	54	38	92
LANGUAGE AND LITERATURE	525	638	1163
American	108	95	203
English	223	302	525
French	25	61	86
German	30	32	62
Italian	8	6	14
Spanish	54	91	145
Russian	13	15	28
Slavic	7	3	10
Chinese	7	7	14
Japanese	10	3	13
Hebrew	6	3	9
Arabic	4	1	5
Other Languages	30	19	49
Humanities, General	16	11	27
Humanities, Other	26	33	59

Subfield of Doctorate	Number of Doctorates		
	Men	Women	Total
PROFESSIONAL FIELDS	**1261**	**595**	**1856**
BUSINESS ADMINISTRATION	649	144	793
Accounting	119	29	148
Banking and Finance	95	9	104
Business Admin and Management	159	20	179
Business Economics	18	2	20
Marketing Management and Research	70	24	94
Business Statistics	8	1	9
Operations Research	41	4	45
Organizational Behavior	39	29	68
Business and Management, General	40	10	50
Business and Management, Other	60	16	76
COMMUNICATIONS	155	111	266
Communications Research	25	30	55
Journalism	14	8	22
Radio and Television	12	7	19
Communications, General	58	31	89
Communications, Other	46	35	81
OTHER PROFESSIONAL FIELDS	457	340	797
Architecture, Environmental Design	24	12	36
Home Economics	13	77	90
Law	24	1	25
Library and Archival Science	33	39	72
Public Administration	82	27	109
Social Work	79	139	218
Theology	193	36	229
Professional Fields, General			
Professional Fields, Other	9	9	18
EDUCATION	**3237**	**3480**	**6717**
Curriculum and Instruction	323	500	823
Educational Admin and Supervision	926	679	1605
Educational Media	51	50	101
Educational Statistics and Research	31	43	74
Educational Testing, Eval and Meas	20	24	44
Educational Psychology	174	216	390
School Psychology	45	57	102
Social Foundations	75	59	134
Special Education	85	185	270
Student Counseling, Personnel Serv	186	209	395
Higher Education	298	288	586
Pre-elementary Education	10	57	67
Elementary Education	31	90	121
Junior High Education	1		1
Secondary Education	31	38	69
Adult and Continuing Education	95	113	208
TEACHING FIELDS	560	557	1117
Agricultural Education	34	6	40
Art Education	18	25	43
Business Education	19	33	52
English Education	24	44	68
Foreign Languages Education	16	14	30
Health Education	27	62	89
Home Economics Education	3	18	21
Industrial Arts Education	13		13
Mathematics Education	33	32	65
Music Education	57	23	80
Nursing Education	1	20	21
Physical Education	136	84	220
Reading Education	20	93	113
Science Education	49	39	88
Social Science Education	16	8	24
Speech Education	4	3	7
Trade and Industrial Education	59	23	82
Other Teaching Fields	31	30	61
Education, General	159	144	303
Education, Other	136	171	307
OTHER AND UNSPECIFIED	20	16	36

SOURCE: National Research Council, Office of Scientific and Engineering Personnel, Doctorate Records File

TABLE 1A Number of Doctorate Recipients by Citizenship, Racial/Ethnic Group, and Subfield, 1989

Subfield of Doctorate	Total Doctorates	Non-U.S. Citizens Temp. Visas	U.S. Citizens and Non-U.S. with Permanent Visas[1] Racial/Ethnic Group								
			Total	Amer. Ind.	Asian	Black	White	Puerto Rican	Mexican	Other Hispanic	Other & Unk
TOTAL ALL FIELDS	31201[2]	1218	28561	93	1067	1060	21178	185	191	295	556
PHYSICAL SCIENCES	6521	1084	5291	6	220	61	2816	8	18	28	106
MATHEMATICS	689	239	410		33	7	350		5	7	16
Applied Mathematics	117	67	44		6		51		3	3	2
Algebra	55	21	34		2		30				2
Analysis and Functional Analysis	83	27	56		2		51		1		2
Geometry	35	14	21		1		18			1	1
Logic	30	6	24		3		21				1
Number Theory	18	7	11				10				1
Probability and Math Statistics	150	61	88		14	4	67		2	1	
Topology	35	9	26		1		24			1	
Computing Theory and Practice	15	2	13				12				1
Operations Research	22	8	14		1		13				
Mathematics, General	85	35	36		2	1	28			1	4
Mathematics, Other	44	12	31		2	2	25				2
COMPUTER SCIENCE	311	99	213		17	3	177		2	4	10
Computer Sciences	250	71	170		16	3	141		2	1	7
Information Sciences and Systems	61	18	43		1		36			3	3
PHYSICS AND ASTRONOMY	1079	289	744	1	37	6	656	1	3	9	33
Astronomy	43	6	36				33				3
Astrophysics	97	8	89		2		84				2
Acoustics	10	2	8		1		7				
Atomic and Molecular	58	15	43	1	1		40				1
Electron	6	1	5				3				
Elementary Particles	154	48	106		7	1	94		1	1	1
Fluids	16	5	11				9			1	1
Nuclear Structure	86	22	64		2		54			2	6
Optics	50	13	35		1		34				
Plasma	55	15	40		2		34			1	1
Polymer	11	2	9		1		5				
Solid State	268	79	189		10	1	169	1	1	2	5
Physics, General	176	65	95		4	1	78			1	9
Physics, Other	110	27	79		2	1	70		1	1	4
CHEMISTRY	1836	330	1431	2	112	23	1242	7	5	5	35
Analytical	285	36	248	1	9	2	230	2		1	3
Inorganic	251	38	211		13	2	187	1	1	2	5
Nuclear	7	1	6			1	5				
Organic	493	87	401		28	11	341	3	2	1	5
Pharmaceutical	60	9	48		10		36				2
Physical	304	54	249		10	2	226	1	2		9
Polymer	84	25	59		18	2	39				
Theoretical	68	5	63		2		60				1
Chemistry, General	216	55	161		9	2	91			1	8
Chemistry, Other	90	20	66	1	1	1	59				2
EARTH, ATMOSPHERIC AND MARINE SCI	617	117	475	1	21	4	431		3	3	12
Atmospheric Physics and Chemistry	16	1	15		1		14				
Atmospheric Dynamics	21	6	15		2		13				
Meteorology	22	6	16		1	1	14				1
Atmos and Meteorological Sci, Gen	10	4	6		1		4				
Atmos and Meteorological Sci, Other	10	3	6				6				
Geology	111	22	86	1	2		79			1	3
Geochemistry	48	9	39			2	36				1
Geophysics and Seismology	91	21	65		6		56		2		1
Paleontology	23	1	20				20				
Mineralogy, Petrology	28	3	25				24				1
Stratigraphy, Sedimentation	23	3	20				20				
Geomorphology and Glacial Geology	13	1	12				12				
Applied Geology	8	1	7				5		1		1
Geological Sciences, General	11	3	8				8				
Geological Sciences, Other	11	3	8				8				
Environmental Sciences	42	6	35		2	1	30			2	
Hydrology and Water Resources	17	5	9		2		7				
Oceanography	68	13	52		2		47				3
Marine Sciences	24	4	20				20				
Physical Sciences, Other	20	4	11		2		8				1
ENGINEERING	3165	1413	1594	1	291	24	1188	5	6	11	49
Aerospace, Aeronaut & Astronaut	124	51	70		12	3	53				2
Agricultural	60	26	26		1	2	21	1	1		
Bioengineering and Biomedical	69	14	52		5		45				2
Ceramic	19	5	13		1		11				1
Chemical	440	172	257		48	4	190	1	1		13
Civil	357	191	152		24	4	114	2	1	4	3

1/ For an explanation of racial/ethnic groups see items 9 and 10 on questionnaire on page 63 and description on page 39.
2/ Includes 1,426 individuals who did not report their citizenship at time of doctorate.

TABLE 1A (continued)

Subfield of Doctorate	Total Doctorates	Non-U.S. Citizens Temp. Visas	U.S. Citizens and Non-U.S. with Permanent Visas Racial/Ethnic Group[1]								
			Total	Amer. Ind.	Asian	Black	White	Puerto Rican	Mexican	Other Hispanic	Other & Unk
Communications	30	12	17		5		12				
Computer	54	25	25		12		13				
Electrical, Electronics	431	273	312	1	66	6	235		3	1	10
Engineering Mechanics	88	46	37		7	1	27				2
Engineering Physics	12	4	8		2		6				
Engineering Science	31	13	18		4		13	1			
Environmental Health Engineering	33	15	18		2		16				
Industrial	92	48	37		6	2	27				2
Materials Science	108	78	103		17		81				4
Mechanical	424	191	214		51	2	149			3	9
Metallurgical	94	43	50		10	2	37				1
Mining and Mineral	14	8	7				7				
Naval Architecture, Marine Eng	8	6	2				2				
Nuclear	96	48	43		5	1	35			1	1
Ocean	25	20	5				5				
Operations Research	54	25	28		5		21			1	1
Petroleum	26	11	11		5		6				
Polymer	40	16	24		7	2	15				
Systems Engineering	57	29	25		2	2	18				3
Engineering, General	26	9	6				3				1
Engineering, Other	69	26	37		4	1	26			1	5
LIFE SCIENCES	**5748**	**922**	**4619**	**18**	**210**	**98**	**4112**	**19**	**17**	**53**	**93**
BIOLOGICAL SCIENCES	**3766**	**422**	**3334**	**13**	**151**	**53**	**2890**	**10**	**11**	**38**	**68**
Biochemistry	579	69	498	2	34	6	439	1	1	6	9
Biophysics	69	9	58		4		54				
Bacteriology	17	2	15	1		1	13				
Plant Genetics	31	6	25		2	1	20	1			1
Plant Pathology	30	10	29		2	2	24				
Plant Physiology	58	12	46		1		43		1		1
Botany, Other	120	17	100	3	4	1	88			2	2
Anatomy	133	10	118		7		109			1	1
Biometrics and Biostatistics	40	6	33		3	2	25		1		2
Cell Biology	100	7	90	1	4	1	80	1	1		2
Ecology	200	17	182	1	5		172	2		1	1
Embryology	15		15				15				
Endocrinology	17	3	14		1		12		1		
Entomology	173	32	136		1	1	128	2	1	1	2
Immunology	121	10	110		6	2	95			2	5
Molecular Biology	277	30	244	2	15	1	218	1		2	4
Microbiology	287	38	241	1	8	5	222		2	2	1
Neurosciences	156	12	141		3	1	133			3	1
Nutritional Sciences	113	24	88		5	4	72	1		1	5
Parasitology	21	3	18		1	2	14			1	
Toxicology	98	6	89	1	4	1	82		1		
Human and Animal Genetics	105	11	92		5	3	78			1	5
Human and Animal Pathology	109	13	94		2	1	89			2	
Human and Animal Pharmacology	229	19	205		11	7	176			6	7
Human and Animal Physiology	239	23	204		8	4	186			3	3
Zoology, Other	147	9	128		6	5	115			1	1
Biological Sciences, General	191	14	153		8	1	126		2	2	14
Biological Sciences, Other	84	10	69		1	1	62	1		3	1
HEALTH SCIENCES	**724**	**97**	**572**	**1**	**33**	**23**	**491**	**4**	**4**	**6**	**10**
Audiology and Speech Pathology	99	3	96			5	85		3	1	2
Environmental Health	31	3	28	1			25				2
Public Health	102	11	90		2	8	68			2	
Epidemiology	76	11	62		2	1	57	1		1	
Nursing	177	15	157		3	4	146	2	1		1
Pharmacy	106	31	59		19		36	1		1	4
Veterinary Medicine	51	17	32		3	2	27				
Health Sciences, General	14	1	5				5				
Health Sciences, Other	68	5	53		6	3	44			1	1
AGRICULTURAL SCIENCES	**1258**	**403**	**813**	**4**	**26**	**22**	**731**	**6**	**2**	**9**	**15**
Agricultural Economics	147	40	97		2	6	72	2	1		4
Animal Breeding and Genetics	28	9	18				17				1
Animal Nutrition	78	25	53				50	1		1	1
Animal Sciences, Other	95	29	64		1	2	55			1	5
Agronomy	150	50	93	1	1	1	90				
Plant Breeding and Genetics	88	25	61		5		54		1	1	
Plant Pathology	89	25	61		2	1	58	1			1
Plant Sciences, Other	21	8	12				11			1	
Food Sciences	136	53	79	1	9	6	64			1	
Soil Sciences	97	41	54		1	2	49			2	
Horticulture Science	76	27	46		3		42			1	
Fisheries Science	36	2	33				33				
Wildlife Management	38	6	31			1	32				
Forestry Science	105	19	81	2	1	2	76				2
Agriculture, General	5	1	2			1	1				
Agriculture, Other	61	30	30		1	2	25			1	1

TABLE 1A (continued)

Subfield of Doctorate	Total Doctorates	Non-U.S. Citizens Temp. Visas	U.S. Citizens and Non-U.S. with Permanent Visas Racial/Ethnic Group[1]								
			Total	Amer. Ind.	Asian	Black	White	Puerto Rican	Mexican	Other Hispanic	Other & Unk
SOCIAL SCIENCES (INCL. PSYCH)	**5720**	**668**	**4747**	**17**	**118**	**295**	**4159**	**25**	**48**	**65**	**114**
Anthropology	353	23	316	3	13	10	280	2	5	8	16
Area Studies	19	3	14		1	1	9			2	1
Criminology	38	7	31		2	2	27				
Demography	24	12	12	1			9		1		1
Economics	785	269	481	2	26	14	405	2	3	9	20
Econometrics	27	10	17		1	1	15				
Geography	120	26	86		4	1	77	1	1	1	1
International Relations	78	13	60		1	4	48	1		3	5
Political Science and Government	407	79	292	1	10	22	236		2	4	17
Public Policy Studies	70	5	58		1	4	53				
Sociology	461	60	380		8	26	323	5	7	5	6
Statistics	60	34	21		4		17				
Urban Studies	76	21	51		3	6	37	1	1		1
Social Sciences, General	10	4	5			1	7				1
Social Sciences, Other	109	16	89		1	6	80	1		1	
PSYCHOLOGY	**3075**	**62**	**2830**	**10**	**68**	**105**	**2558**	**12**	**24**	**32**	**65**
Clinical	1160	9	1099	2	16	50	992	4	5	15	15
Cognitive	76	3	73	1	2		69			1	
Comparative	11		11				11				
Counseling	439	7	415	3	4	17	376	1	4	6	4
Developmental	176	9	165		3	4	152	1	1	1	2
Experimental	165	12	153		1	2	147			1	2
Educational	127	3	120	1	2	5	108		1	2	1
Industrial and Organizational	99	2	97	1	1	1	91		1		2
Personality	21		21			2	18				1
Physiological	79	5	74		1	1	70	1			1
Psychometrics	10	2	8				7				1
Quantitative	16	1	15		2	1	12				
School	92	1	90		1	3	80	1	1	2	2
Social	166	7	158		4	11	140		3		
Psychology, General	258	11	171	1	2	4	143	3	4	2	12
Psychology, Other	190	10	159	1	5	4	142	1	4		2
HUMANITIES	**3428**	**258**	**2998**	**8**	**47**	**75**	**2668**	**19**	**24**	**70**	**71**
History, American	175	7	149	1	1	10	152		1	1	2
History, European	142	4	135				130	1		1	3
History of Science	23	4	18				17				1
History, General	67	10	54	1		2	45	1	1		4
History, Other	116	14	100		5	5	84	1	1	1	2
Classics	44	5	38				36				2
Comparative Literature	133	19	108		3	5	91	1		6	2
Linguistics	176	46	122	1	11	2	99	2	1	2	4
Speech and Debate	38		38			6	30			3	1
Letters, General	13		13				12				1
Letters, Other	24	2	23	2		1	20				
American Studies	87	5	79		1	3	72		2		2
Archeology	24	3	21				21				
Art History and Criticism	137	8	123		3	3	108		2	3	4
Music	447	21	394	1	8	9	360	1	2	4	9
Philosophy	238	19	209		7	4	190		1	2	5
Religion	181	10	165		7	5	146			3	4
Theatre	92	7	81		2	2	74				1
LANGUAGE AND LITERATURE	**1163**	**49**	**1068**	**1**	**10**	**10**	**917**	**12**	**12**	**44**	**21**
American	203	13	189		1	4	178		3	1	2
English	534	23	476	1	8	6	449	1	2	2	7
French	86	6	78			6	71	1			
German	62	8	51				48				3
Italian	18	1	13				13				
Spanish	145	10	129			2	72	8	6	30	2
Russian	29		29				27				1
Slavic	10	1	9				7				1
Chinese	14	2	12		4		7				1
Japanese	13	2	10		4		6				
Hebrew	9	1	8				8				
Arabic	5	1	4				4				
Other Languages	69	2	59		1	1	27	2	1	3	4
Humanities, General	27		22	1	1	1	18				1
Humanities, Other	59	9	43				40		1		2

TABLE 1A (continued)

Subfield of Doctorate	Total Doctorates	Non-U.S. Citizens Temp. Visa	U.S. Citizens and Non-U.S. with Permanent Visas Racial/Ethnic Group[1]								
			Total	Amer. Ind.	Asian	Black	White	Puerto Rican	Mexican	Other Hispanic	Other & Unk
PROFESSIONAL FIELDS	1854	313	1619	5	72	81	1204	13	9	9	26
BUSINESS ADMINISTRATION	793	169	579	2	47	12	503	2	1	3	9
Accounting	148	25	121		10	5	101			1	4
Banking and Finance	104	35	69		8	1	59	1			
Business Admin and Management	179	28	122		6	1	111		1	2	1
Business Economics	20	8	12		1	1	9				1
Marketing Management and Research	96	12	81	1	7	2	71				
Business Statistics	9	3	6		2		4				
Operations Research	45	23	21		5		16				
Organizational Behavior	68	6	62	1		1	59				1
Business and Management, General	50	16	33		1	1	19				2
Business and Management, Other	76	14	62		7		54	1			
COMMUNICATIONS	266	48	206	1	4	10	176	1	2	1	3
Communications Research	55	9	46		1	5	39				1
Journalism	22	7	15		2	1	12				
Radio and Television	19	6	13			3	10				
Communications, General	89	12	72	1		6	62		1		2
Communications, Other	81	14	60		1	3	53	1	1	1	
OTHER PROFESSIONAL FIELDS	797	96	634	2	21	51	527	10	6	5	12
Architecture, Environmental Design	36	15	16		1	2	12	1			
Home Economics	90	6	82		3	3	72	2	1	1	
Law	25	14	7				6				1
Library and Archival Science	72	17	52		2	6	41				3
Public Administration	109	12	86			14	67	2	2		1
Social Work	218	9	175	2	8	22	130	4	2	4	3
Theology	229	19	203		6	4	188		1		4
Professional Fields, General											
Professional Fields, Other	18	4	13		1		11	1			
EDUCATION	6717	570	5872	29	98	503	4963	57	73	59	80
Curriculum and Instruction	823	81	720	5	13	58	596	17	15	9	15
Educational Admin and Supervision	1605	86	1460	9	20	167	1216	6	18	12	12
Educational Media	101	22	76	1	2	3	69	1			
Educational Statistics and Research	74	9	61	1	1	3	50		1	3	2
Educational Testing, Eval and Meas	44	6	38		3	2	30	1		2	
Educational Psychology	390	25	357	2	7	14	323	2	2	4	3
School Psychology	102		101		1	6	91	1	1	1	
Social Foundations	134	15	116		3	13	91	1	2	4	2
Special Education	270	12	256	2	3	17	230	2	1		1
Student Counseling, Personnel Serv	395	21	365	1	2	25	319	3	5	3	7
Higher Education	586	58	511	7	6	42	441	3	5	5	2
Pre-elementary Education	67	3	57			3	53				1
Elementary Education	121	6	114		1	12	98	1	1	1	
Junior High Education	1		1				1				
Secondary Education	69	12	51		1	2	46		2		
Adult and Continuing Education	200	17	185	1	3	11	163	2	3	1	1
TEACHING FIELDS	1117	131	957	3	18	78	812	11	6	11	18
Agricultural Education	40	9	31		1	4	26				
Art Education	63	7	36			1	32	1			2
Business Education	52	4	47			8	38	1			
English Education	68	7	61		1	5	51	1		2	1
Foreign Languages Education	30	9	21		2	1	14	2		2	
Health Education	89	5	77		1	3	66	1	2	2	2
Home Economics Education	21	3	17			5	12				
Industrial Arts Education	13		13			1	12				
Mathematics Education	65	13	52	1	3	3	42		1	2	
Music Education	80	6	73		1	6	66				
Nursing Education	21	1	20		2	2	16				
Physical Education	220	28	185	2	1	9	169				4
Reading Education	113	4	106		1	7	93	2	1	1	1
Science Education	88	18	68		3	6	54	1	1	1	2
Social Science Education	24	4	19			5	12				2
Speech Education	7	2	4				4				
Trade and Industrial Education	82	10	71		1	9	58		1		3
Other Teaching Fields	61	3	56		1	4	47	2		1	1
Education, General	303	33	178	1	6	25	130	2	6	2	8
Education, Other	307	33	260	6	8	22	204	6	7	1	8
OTHER AND UNSPECIFIED	36	2	31	1	1	3	26				

SOURCE: National Research Council, Office of Scientific and Engineering Personnel, Doctorate Records File.

TABLE 2 Statistical Profile of Doctorate Recipients by Field of Doctorate, 1985 1/

Total All Doctorates

	1985 Total	Physics and Astronomy	Chemistry	Earth, Atmospheric and Marine Sciences	Physical Sciences	Mathematics	Computer Sciences	Engineering	EMP Fields	Biochemistry	Other Biosciences	Biosciences	Health Sciences	Agricultural Sciences	Life Sciences
Number in Field	31201	1078	1836	617	3531	689	311	3165	7696	579	3187	3766	724	1258	5748
Male %	65.7	90.5	80.3	82.0	83.7	84.6	89.4	93.7	88.1	68.2	67.2	67.4	40.1	84.7	67.7
Female	34.3	9.5	19.7	18.0	16.3	15.4	10.6	6.3	11.9	31.8	32.8	32.6	59.9	15.3	32.3
U.S. Citizenship %	74.5	64.6	73.2	72.0	70.3	54.6	60.8	40.4	56.2	81.2	83.3	83.0	74.3	60.9	77.1
Non-U.S., Permanent Visa	4.2	4.5	4.7	5.0	4.7	6.1	7.7	10.0	7.1	4.8	2.5	2.9	4.7	3.7	3.3
Non-U.S., Temporary Visa	16.7	26.8	18.0	19.0	20.8	34.7	28.6	44.6	32.2	11.9	11.1	11.2	13.4	32.0	16.0
Unknown	4.6	4.2	4.1	4.1	4.1	4.6	2.9	5.0	4.5	2.1	3.1	2.9	7.6	3.3	3.6
Married %	58.3	49.8	50.7	57.4	51.6	51.4	58.8	59.6	55.1	51.5	55.3	54.7	56.5	67.3	57.7
Not Married	35.6	44.7	44.7	37.0	43.4	42.2	37.0	33.5	39.0	44.2	40.3	40.9	33.7	28.2	37.2
Unknown	6.1	5.5	4.6	5.7	5.1	6.4	4.2	6.9	5.9	4.3	4.5	4.4	9.8	4.5	5.1
Median Age at Doctorate	33.3	29.8	28.9	31.3	29.5	30.4	31.0	30.9	30.2	29.1	30.9	30.5	35.2	32.2	31.3
Percent with Bacc in Same Field as Doctorate	55.9	78.1	81.6	49.8	75.0	73.3	19.6	74.2	72.3	28.7	65.0	59.4	52.2	58.6	58.3
Percent with Masters	80.0	64.7	37.4	75.5	52.4	74.2	81.4	86.7	69.6	29.7	54.3	50.6	83.7	92.4	63.9
Median Time Lapse From Bacc to Doct															
Total Time Yrs	10.2	7.4	6.4	8.8	7.1	7.8	9.0	8.1	7.5	6.8	8.1	7.9	11.8	8.9	8.4
Registered Time	6.8	6.5	5.5	6.7	6.0	6.3	6.3	5.8	5.9	6.0	6.5	6.4	6.6	6.1	6.3
Postdoctoral Study Plans %	20.8	49.6	45.5	37.6	45.4	17.6	11.9	15.7	29.3	83.4	63.4	66.5	14.8	20.4	49.9
Fellowship	10.1	15.8	19.5	16.2	17.8	8.4	2.6	4.2	10.8	52.0	36.4	38.8	8.3	6.7	27.9
Research Assoc	8.4	32.9	24.6	20.3	26.4	7.7	7.4	9.4	17.0	23.5	20.3	20.8	5.2	12.3	17.0
Traineeship	1.0	.3	.6	.8	.5	.7	1.0	1.6	1.0	1.7	1.8	1.8	.6	1.0	1.5
Other Study	1.3	.6	.8	.3	.7	.7	1.0	.4	.6	6.2	4.9	5.1	.7	.5	3.5
Planned Employment After Doctorate %	71.2	43.2	47.4	54.9	47.5	74.3	80.7	73.3	61.8	12.6	30.5	27.7	75.1	72.7	43.6
Educ Institution	41.3	12.0	8.0	24.3	12.0	54.1	43.7	26.0	22.8	4.7	15.7	14.0	46.1	36.5	23.0
Industry/Business	14.2	22.8	35.3	16.0	28.1	12.3	30.9	35.6	29.9	6.0	7.6	7.4	11.2	16.0	9.7
Government	7.5	6.3	2.7	11.0	5.3	4.9	2.3	8.2	6.3	1.0	4.5	4.0	8.3	14.4	6.8
Nonprofit	4.7	1.4	.5	.8	.8	.9	1.0	1.4	1.1	.3	1.5	1.3	5.8	1.6	1.9
Other & Unknown	3.4	.7	1.0	2.8	1.2	2.0	2.9	2.2	1.8	.5	1.2	1.1	3.7	4.3	2.1
Postdoc Status Unknown %	8.0	7.1	7.1	7.5	7.2	8.1	7.4	11.0	8.8	4.0	6.1	5.8	10.1	6.8	6.5
Definite Postdoctoral Study	14.7	37.4	34.4	25.0	33.6	11.5	7.1	9.1	20.5	71.2	49.3	52.7	9.5	11.2	38.2
Seeking Postdoctoral Study	6.1	12.2	11.1	12.6	11.7	6.1	4.8	6.6	8.8	12.3	14.1	13.8	5.2	9.2	11.7
Definite Employment	51.7	32.3	37.6	41.7	36.7	56.6	62.1	53.1	46.2	9.7	20.6	19.0	57.0	51.6	30.9
Seeking Employment	19.6	10.9	9.9	13.3	10.8	17.7	18.6	20.2	15.6	2.9	9.9	8.8	18.1	21.1	12.7
Employment Activity After Doctorate															
Primary Activity															
R & D %	27.5	71.6	77.7	49.0	70.3	41.5	63.7	64.5	64.1	60.7	48.5	49.4	35.6	56.2	48.7
Teaching	36.9	16.4	13.3	32.7	18.0	48.5	26.4	22.8	24.1	23.2	28.0	27.6	39.0	18.2	26.8
Administration	13.5	.9	.7	2.7	1.2	1.0	2.1	1.8	1.5	.0	4.4	4.1	7.7	2.3	4.3
Prof. Services	12.8	3.7	2.6	6.2	3.6	2.3	2.1	3.8	3.5	7.1	10.0	9.8	11.1	7.9	9.4
Other	3.0	1.7	1.7	5.1	2.4	1.3	1.0	1.8	1.9	.0	3.3	3.1	1.9	7.4	4.4
Activity Unknown	6.3	5.7	3.9	4.3	4.5	5.4	4.7	5.3	5.0	8.9	5.8	6.0	4.6	8.0	6.4
Secondary Activity															
R & D	25.4	14.7	10.7	29.2	15.4	40.3	24.9	21.6	21.6	21.4	26.7	26.3	32.2	20.8	25.7
Teaching	13.0	7.8	4.1	12.5	6.7	23.8	23.3	13.1	12.5	3.6	14.4	13.6	18.2	20.3	17.1
Administration	9.4	6.0	15.2	5.8	10.9	3.1	7.3	8.5	8.7	12.5	10.6	10.8	10.7	10.0	10.5
Prof. Services	7.0	4.3	5.8	5.4	5.3	4.1	3.6	5.1	5.0	.0	7.0	6.4	9.4	7.1	7.4
Other	2.1	2.0	1.0	.8	1.2	.8	1.0	1.0	1.1	.0	1.2	1.1	1.9	2.5	1.8
No Secondary Activity	36.7	59.5	59.3	42.0	55.9	22.6	35.2	45.4	46.2	53.6	34.2	35.7	23.0	31.3	31.1
Unknown	6.3	5.7	3.9	4.3	4.5	5.4	4.7	5.3	5.0	8.9	5.8	6.0	4.6	8.0	6.4
Region of Employment After Doctorate															
New England %	5.8	6.9	7.0	3.9	6.3	9.7	14.5	5.4	6.7	7.1	4.9	5.0	4.1	2.6	3.9
Middle Atlantic	15.3	18.1	24.8	10.1	20.1	16.7	22.8	14.5	17.2	25.0	12.3	13.3	17.9	6.5	11.9
East No Central	13.9	8.6	19.7	9.3	14.7	15.9	10.4	13.5	14.0	19.6	14.1	14.6	15.0	9.7	12.9
West No Central	6.7	4.3	6.5	6.2	5.9	7.2	2.6	4.4	5.1	16.1	8.8	9.4	5.6	10.2	8.8
South Atlantic	14.6	12.9	15.8	11.7	14.2	12.3	8.8	12.8	13.0	3.6	16.1	15.1	13.8	13.4	14.2
East So Central	3.9	.9	2.0	1.9	1.7	4.4	2.1	2.7	2.5	.0	4.1	3.8	4.8	4.9	4.4
West So Central	7.7	6.0	5.1	13.6	7.0	4.9	6.2	5.8	6.2	3.6	5.9	5.7	10.4	6.6	7.2
Mountain	4.6	8.3	2.0	7.0	4.7	2.6	3.1	5.8	4.9	1.8	3.6	3.5	4.6	4.3	4.1
Pacific & Insular	10.3	21.0	7.8	17.5	13.3	10.0	15.5	13.3	13.1	10.7	12.2	12.0	7.7	5.4	8.6
Foreign	10.3	6.9	4.6	16.7	7.6	11.5	10.9	16.1	12.2	10.7	14.6	14.3	11.1	31.1	19.7
Region Unknown	7.0	6.0	4.6	1.9	4.5	4.9	3.1	5.8	5.1	1.8	3.3	3.2	4.8	5.2	4.3

1/ Refer to explanatory note on pages 38-39 and the description of doctoral fields inside back cover.

TABLE 2 (Continued)

Total All Doctorates

Psychology	Economics	Anthropology and Sociology	Political Sci. and International Rel.	Other Social Sciences	Social Sciences Incl. Psychology	Total Sciences	History	Eng. and Amer. Lang. and Lit.	Foreign Lang. and Lit.	Other Humanities	Humanities	Business and Management	Other Professional Fields	Education	Total Non-Sciences	Other or Unspecified 2/
3075	812	814	485	534	5720	19164	543	728	435	1722	3428	793	1063	6717	12001	36
50.6	84.7	49.0	74.4	68.2	58.9	73.3	67.2	45.5	44.6	60.9	56.6	81.8	57.6	48.2	53.6	55.6
49.4	15.3	51.0	25.6	31.8	41.1	26.7	32.8	54.5	55.4	39.1	43.4	18.2	42.4	51.8	46.4	44.4
90.1	53.9	81.7	67.6	62.7	79.3	69.4	84.2	88.9	76.6	81.9	83.1	64.8	76.2	85.5	82.6	
1.9	7.4	3.8	4.9	6.7	3.7	4.9	3.3	2.5	10.6	3.9	4.4	8.2	2.8	1.9	3.1	
2.7	34.4	10.2	19.0	24.3	11.6	21.2	7.6	4.9	7.6	8.9	7.7	21.3	13.5	8.5	9.6	
5.3	4.3	4.3	8.5	6.2	5.4	4.5	5.0	3.7	5.3	5.2	4.8	5.7	7.4	4.1	4.7	
50.5	57.0	54.5	56.7	60.9	53.5	55.4	57.6	56.0	56.1	55.5	56.0	65.1	59.2	66.9	63.0	
42.7	35.3	40.0	31.8	30.9	39.3	38.5	35.2	39.1	36.6	37.6	37.4	28.0	32.3	27.8	30.9	
6.8	7.6	5.4	11.5	8.2	7.2	6.1	7.2	4.8	7.4	7.0	6.6	6.9	8.6	5.3	6.1	
32.5	31.6	35.0	34.0	35.1	33.0	31.3	34.9	34.7	35.2	34.6	34.7	35.0	37.3	38.7	37.2	
65.4	62.3	53.8	57.3	21.7	58.5	64.0	60.4	71.4	55.6	53.7	58.8	38.8	24.2	38.7	43.2	
81.5	75.9	88.7	86.4	89.7	82.9	71.9	90.6	87.0	86.0	88.3	88.1	89.7	92.9	96.0	93.0	
9.4	8.8	11.4	10.4	11.5	9.9	8.5	11.6	11.9	11.9	11.7	11.7	11.8	13.8	15.1	13.8	
6.9	6.5	8.5	7.6	7.4	7.1	6.4	8.8	8.3	8.7	8.1	8.3	7.0	7.5	7.6	7.8	
18.9	5.8	13.4	7.0	9.0	14.3	31.0	9.0	3.3	6.9	6.9	6.5	1.9	3.5	4.0	4.5	
11.3	2.6	8.8	3.1	5.4	8.5	15.2	6.1	2.1	3.2	4.1	3.9	.4	1.3	1.4	2.0	
3.4	2.1	3.2	2.9	3.2	3.1	12.8	1.1	.3	1.4	1 5	1.1	1.1	.9	1.3	1.2	
2.9	.2	.6	.6	.2	1.8	1.4	.2	.3	.0	.0	.1	.4	.1	.6	.4	
1.3	.9	.7	.4	.2	1.0	1.6	1.7	.7	2.3	1.4	1.4	.0	1.1	.7	.9	
73.7	84.7	79.2	78.6	81.6	77.2	60.9	80.8	89.6	83.0	84.7	84.9	89.4	85.4	89.3	87.7	
26.1	53.9	49.3	54.0	46.3	37.6	27.3	57.8	75.7	68.0	64.3	66.2	74.3	52.7	63.1	63.8	
15.1	10.8	8.7	6.8	10.3	12.4	18.6	4.8	6.5	5.3	6.6	6.1	11.0	8.3	7.1	7.2	
11.1	11.8	7.7	11.5	11.0	10.8	7.8	6.4	1.2	2.5	1.7	2.5	2.3	7.9	10.0	7.1	
16.1	2.5	6.4	2.3	5.6	10.6	4.2	5 9	1.5	1.6	7.7	5.3	.6	13.5	5.1	5.6	
5.2	5.7	7.1	3.9	8.4	5.7	3.1	5.3	4.7	5.5	4.4	4.8	1.3	3.0	4.0	4.0	
7.4	9.5	7.4	14.4	9.4	8.5	8.1	10.1	7.1	10.1	8.4	8.6	8.7	11.1	6.8	7.8	
13.0	3.4	6.8	4.3	4.9	9.3	22.4	5.3	1.6	3.7	3.5	3.4	1.3	2.0	2.1	2.4	
5.9	2.3	6.6	2.7	4.1	5.1	8.6	3.7	1.6	3.2	3.4	3.1	.6	1.5	1.9	2.1	
52.1	67.4	47.5	51.5	53.4	53.7	43.9	54.1	56.5	57.0	54.8	55.3	78.6	66.3	66.5	64.1	
21.6	17.4	31.7	27.0	28.3	23.5	17.1	26.7	33.1	26.0	29.9	29.6	10.8	19.1	22.7	23.6	
16.0	38.6	31.3	18.8	24.2	22.9	45.8	9.5	4.1	4.8	8.1	7.0	20.9	10.5	5.5	7.6	
16.9	43.9	45.2	52.0	45.3	30.8	27.1	60.5	80.8	79.4	69.8	72.0	63.2	48.5	35.0	47.7	
6.2	2.0	9.6	9.6	9.8	6.5	3.9	12.9	5.1	2.8	4.3	5.6	5.5	14.0	36.0	24.0	
55.0	3.5	6.2	3.2	7.4	31.0	14.8	5.8	2.4	2.0	6.7	5.0	2.7	15.7	13.2	10.6	
2.1	3.7	3.4	7.6	5.3	3.3	2.9	5.1	2.7	2.8	5.1	4.3	2.1	4.4	2.4	3.0	
3.8	8.4	4.4	8.8	8.1	5.5	5.5	6.1	4.9	8.1	6.0	6.1	5.6	6.8	7.8	7.1	
20.7	38.2	34.9	36.8	36.5	28.4	24.9	38.1	39.2	42.3	34 3	37.0	51.4	29.9	17.1	25.9	
15.2	18.6	11.4	12.0	13.7	14.9	14.4	9.9	6.6	5.2	8.6	7.9	19.6	12.9	11.7	11.5	
12.3	4.9	11.1	6.4	5.3	9.7	9.4	7.5	8.0	4.4	8.0	7.4	4.5	10.1	10.8	9.4	
9.9	3.8	5.9	2.0	6.0	7.3	6.3	3.1	2.2	.8	5.4	3.7	1.9	9.5	10.1	7.8	
3.4	.7	2.3	.8	.7	2.3	1.7	1.7	3.2	.8	5.7	3.9	1.3	2.3	2.3	2.6	
34.8	25.2	30.0	33.2	29.8	31.9	37.8	33.7	36.0	38.3	32.0	34.0	15.7	28.5	40.2	35.6	
3.8	8.4	4.4	8.8	8.1	5.5	5.5	6.1	4.9	8.1	6.0	6.1	5.6	6.8	7.8	7.1	
6.7	5.7	6.5	6.0	6.3	6.4	6.0	9.2	5.4	12.1	8.5	8.4	5.1	4.0	4.6	5.5	
20.7	15.0	16.0	19.2	11.9	18.2	16.4	14.6	13.1	15.3	15.4	14.8	12.0	14.9	13.8	14.0	
14.1	14.3	14.7	10.4	14.4	13.9	13.7	11.2	15.8	13.7	13.5	13.7	17.5	14.2	13.7	14.1	
7.1	4.6	4.1	4.0	3.2	5.7	6.1	5.4	7.8	10.5	8.1	7.9	5.8	5.8	7.5	7.3	
13.1	19.9	14.0	17.6	15.4	15.0	14.0	14.3	17.5	15.3	10.7	13.3	14.3	15.0	16.3	15.3	
3.5	2.6	2.6	2.4	3.2	3.1	3.1	6.1	4.9	4.4	3.9	4.5	5.1	5.0	4.8	4.8	
7.8	4.0	4.4	7.6	6.3	6.5	6.5	7.1	9.5	4.4	8.4	7.9	13.2	10.4	8.8	9.1	
4.1	3.3	6.7	3.2	3.5	4.1	4.4	6.1	3.9	1.6	3.9	4.0	3.9	3.3	5.6	4.8	
12.5	6.2	13.2	7.6	9.5	10.8	11.3	12.2	10.2	9.7	9.4	10.1	9.8	9.8	8.5	9.1	
2.3	19.2	11.6	15.2	17.5	9.0	12.6	7.1	4.9	2.4	9.5	7.2	9.3	11.3	7.2	7.7	
8.1	5.3	6.2	6.8	8.8	7.3	5.7	6.5	7.1	10.5	8.7	8.2	4.0	6.4	9.3	8.3	

2/ Statistics are not presented for this group because too few records contained the specific data.

SOURCE: National Research Council, Office of Scientific and Engineering Personnel, Doctorate Records File.

TABLE 2 Statistical Profile of Doctorate Recipients by Field of Doctorate, 1985 1/

Doctorates: Men

	1985 Total	Physics and Astronomy	Chemistry	Earth, Atmospheric and Marine Sciences	Physical Sciences	Mathematics	Computer Sciences	Engineering	EMP Fields	Biochemistry	Other Biosciences	Biosciences	Health Sciences	Agricultural Sciences	Life Sciences
Total Male	20502	976	1474	506	2956	583	278	2967	6784	395	2142	2537	290	1066	3893
Male as a Percent of Total Doctorates %	65.7	90.5	80.3	82.0	83.7	84.6	89.4	93.7	88.1	68.2	67.2	67.4	40.1	84.7	67.7
U.S. Citizenship %	69.1	65.0	73.5	70.4	70.1	52.5	59.4	39.1	54.6	81.8	83.1	82.9	59.0	59.4	74.7
Non-U.S., Permanent Visa	4.9	4.3	4.7	5.3	4.7	5.1	8.6	10.0	7.2	4.1	2.1	2.4	8.3	3.8	3.2
Non-U.S., Temporary Visa	21.4	26.5	18.0	20.6	21.2	37.2	29.1	45.7	33.7	12.2	11.3	11.5	21.0	33.5	18.2
Unknown	4.7	4.2	3.8	3.8	3.9	5.1	2.9	5.1	4.5	2.0	3.4	3.2	11.7	3.4	3.9
Married %	61.8	49.5	52.9	59.5	52.9	50.3	57.6	60.3	56.1	52.7	58.9	57.9	59.0	69.9	61.3
Not Married	31.9	45.0	42.7	35.0	42.2	42.7	38.1	32.7	37.9	42.8	36.4	37.4	26.6	25.5	33.3
Unknown	6.3	5.5	4.3	5.5	4.9	7.0	4.3	7.0	6.0	4.6	4.8	4.7	14.5	4.6	5.4
Median Age at Doctorate	32.5	29.8	28.9	31.5	29.6	30.5	30.9	31.0	30.3	29.0	30.8	30.5	33.3	32.2	31.1
Percent with Bacc in Same Field as Doctorate	57.9	78.5	82.6	49.0	75.5	72.4	20.9	75.2	72.9	31.4	64.6	59.4	36.6	61.1	58.2
Percent with Masters	78.2	64.1	37.4	77.3	53.0	72.9	79.9	86.7	70.6	29.1	55.3	51.2	76.2	92.5	64.4
Median Time Lapse From Bacc to Doct															
Total Time Yrs	9.5	7.4	6.4	8.8	7.1	7.8	8.8	8.2	7.6	6.7	7.9	7.7	10.4	9.0	8.1
Registered Time	6.6	6.4	5.5	6.6	6.0	6.3	6.3	5.8	5.9	6.0	6.4	6.4	6.5	6.1	6.3
Postdoctoral Study Plans %	22.5	49.8	46.7	37.5	46.2	18.0	11.5	15.4	28.9	83.3	62.1	65.4	14.8	19.1	49.0
Fellowship	10.5	15.5	20.2	16.0	17.9	8.7	2.2	4.0	10.4	52.7	34.5	37.3	8.3	6.5	26.7
Research Assoc	9.7	33.3	25.3	20.6	27.1	7.7	7.2	9.4	16.9	22.5	20.0	20.4	4.8	11.5	16.8
Traineeship	1.0	.3	.3	.6	.4	.7	1.1	1.7	1.0	1.5	2.0	1.9	1.0	.8	1.5
Other	1.4	.7	.9	.4	.7	.9	1.1	.4	.6	6.6	5.6	5.8	.7	.4	3.9
Planned Employment After Doctorate %	69.3	43.1	46.8	55.1	47.0	73.4	81.3	73.5	62.3	12.4	31.7	28.7	70.0	74.1	44.2
Educ Institution	38.4	10.9	7.1	24.9	11.4	52.3	43.2	26.0	22.6	3.8	16.0	14.1	33.4	36.7	21.7
Industry/Business	16.4	24.1	35.6	15.6	20.4	13.0	32.4	35.9	30.5	6.6	8.3	8.0	17.6	16.6	11.1
Government	7.7	6.3	2.7	11.1	5.3	5.3	2.5	8.2	6.4	1.3	4.7	4.1	10.0	15.3	7.6
Nonprofit	4.2	1.2	.4	1.0	.8	1.0	.7	1.4	1.1	.5	1.5	1.4	3.4	1.6	1.6
Other & Unknown	2.7	.7	.9	2.6	1.2	1.7	2.5	2.1	1.7	.3	1.2	1.0	5.5	3.9	2.2
Postdoc Status Unknown %	8.2	7.1	6.4	7.3	6.8	8.6	7.2	11.1	8.8	4.3	6.3	6.0	15.2	6.8	6.9
Definite Postdoctoral Study	16.1	37.8	35.5	25.1	34.5	11.1	6.8	8.8	20.1	72.2	48.6	52.3	9.0	10.3	37.6
Seeking Postdoctoral Study	6.4	12.0	11.3	12.5	11.7	6.9	4.7	6.6	8.8	11.1	13.4	13.1	5.9	8.8	11.4
Definite Employment	51.7	32.3	37.9	41.5	36.7	56.3	63.3	53.2	46.7	10.4	22.1	20.3	53.1	53.0	31.7
Seeking Employment	17.6	10.9	8.9	13.6	10.4	17.2	18.0	20.3	15.6	2.0	9.5	8.4	16.9	21.1	12.5
Employment Activity After Doctorate															
Primary Activity															
R & D %	33.3	73.0	79.2	50.0	71.8	43.0	68.2	64.3	64.8	65.9	51.1	52.2	45.5	56.8	53.5
Teaching	34.0	15.2	11.8	32.9	16.9	47.0	22.7	22.7	23.2	14.6	24.5	23.7	27.3	17.5	21.3
Administration	12.3	1.0	.9	2.9	1.3	1.2	1.7	1.8	1.6	.0	4.6	4.3	3.2	2.5	3.3
Prof. Services	10.7	3.8	2.1	4.8	3.1	1.8	1.7	3.9	3.3	7.3	11.0	10.7	13.6	7.6	9.6
Other	3.1	1.6	1.3	4.3	1.9	1.5	1.1	1.8	1.8	.0	3.2	2.9	3.9	7.4	5.1
Activity Unknown	6.7	5.4	4.7	5.2	5.0	5.5	4.5	5.5	5.3	12.2	5.7	6.2	6.5	8.1	7.1
Secondary Activity															
R & D	24.2	13.3	9.7	27.6	14.2	39.6	22.2	21.5	20.9	17.1	24.3	23.7	20.1	20.2	21.6
Teaching	13.3	7.3	4.3	13.3	6.9	24.4	25.0	13.2	12.9	4.9	16.2	15.3	18.2	20.7	18.2
Administration	9.7	6.0	15.9	6.2	11.2	3.0	6.8	8.6	8.8	17.1	13.1	13.4	14.3	10.1	12.0
Prof. Services	6.4	4.8	6.4	5.7	5.8	3.7	3.4	4.9	5.0	.0	7.2	6.6	10.4	7.1	7.3
Other	1.8	2.2	.9	.5	1.2	.3	1.1	1.0	1.0	.0	1.1	1.0	1.9	2.8	1.9
No Secondary Activity	37.9	61.0	58.1	41.4	55.7	23.5	36.9	45.2	46.1	48.8	32.5	33.8	28.6	31.0	31.8
Unknown	6.7	5.4	4.7	5.2	5.0	5.5	4.5	5.5	5.3	12.2	5.7	6.2	6.5	8.1	7.1
Region of Employment After Doctorate															
New England %	5.6	7.0	6.6	2.4	5.9	9.8	13.6	5.3	6.4	9.8	4.9	5.2	5.2	2.3	3.9
Middle Atlantic	14.9	18.4	24.5	9.0	19.7	16.2	23.9	14.3	16.9	24.4	12.7	13.6	19.5	6.5	11.1
East No Central	14.1	8.3	20.8	10.0	15.0	15.2	11.4	13.7	14.2	19.5	13.7	14.2	17.5	9.0	12.2
West No Central	6.7	4.1	6.6	6.7	5.9	7.0	2.8	4.4	5.1	19.5	9.3	10.1	7.1	10.6	10.0
South Atlantic	13.6	12.7	15.0	11.0	13.6	11.9	8.5	12.2	12.4	2.4	13.7	12.8	12.3	13.1	12.9
East So Central	3.6	1.0	2.1	1.9	1.8	4.6	1.1	2.7	2.5	.0	4.2	3.9	3.2	4.8	4.2
West So Central	7.5	6.0	5.0	13.3	6.9	5.2	5.7	6.0	6.2	2.4	6.5	6.2	7.1	6.5	6.5
Mountain	4.7	8.3	2.5	7.6	5.2	3.0	3.4	6.0	5.3	2.4	3.4	3.3	1.9	4.8	3.8
Pacific & Insular	10.3	22.2	7.0	18.6	13.7	10.4	15.9	13.2	13.2	9.8	11.4	11.3	7.8	5.1	8.0
Foreign	12.7	6.7	5.0	18.6	8.1	11.6	11.4	16.4	12.8	7.3	16.7	15.9	13.6	32.2	23.1
Region Unknown	6.2	5.4	4.8	1.0	4.2	5.2	2.3	6.0	5.1	2.4	3.6	3.5	4.5	5.0	4.3

1/ Refer to explanatory note on pages 38-39 and the description of doctoral fields inside back cover.

TABLE 2 (Continued)

Doctorates: Men

Psychology	Economics	Anthropology and Sociology	Political Sci. and International Rel.	Other Social Sciences	Social Sciences Incl. Psychology	Total Sciences	History	Eng. and Amer. Lang. and Lit.	Foreign Lang. and Lit.	Other Humanities	Humanities	Business and Management	Other Professional Fields	Education	Total Non-Sciences	Other or Unspecified 2/
1556	688	399	361	364	3368	14045	365	331	194	1049	1939	649	612	3237	6437	20
50.6	84.7	49.0	74.4	68.2	58.9	73.3	67.2	45.5	44.6	60.9	56.6	81.8	57.6	48.2	53.6	55.6
88.8	51.7	75.9	65.7	56.3	73.7	64.7	85.2	86.7	75.8	81.4	82.5	61.5	70.9	80.9	78.5	
1.9	7.1	4.8	5.3	8.0	4.3	5.4	2.2	2.1	9.8	3.7	3.8	9.2	3.4	2.5	3.6	
3.5	36.8	14.3	21.9	29.7	16.4	25.2	8.8	6.3	8.8	9.3	8.7	23.4	18.6	12.4	13.0	
5.9	4.4	5.0	7.2	6.0	5.6	4.6	3.8	4.8	5.7	5.5	5.1	5.9	7.0	4.2	4.9	
54.0	58.3	60.4	61.5	67.0	57.9	58.0	60.3	58.6	57.7	59.7	59.4	68.7	67.8	77.3	70.1	
38.6	33.9	33.6	28.3	25.0	34.4	35.8	32.6	35.6	34.5	33.0	33.5	24.2	23.7	17.4	23.5	
7.4	7.8	6.0	10.2	8.0	7.7	6.2	7.1	5.7	7.7	7.3	7.1	7.1	8.5	5.3	6.3	
32.3	31.8	34.0	33.8	35.1	32.9	31.1	34.6	34.0	35.1	34.4	34.4	34.9	36.7	38.2	36.7	
68.4	61.6	54.4	58.4	22.8	59.4	65.5	59.2	73.1	46.4	56.1	58.6	41.0	24.3	34.4	41.4	
80.0	77.0	88.5	88.1	90.4	82.4	71.7	91.0	85.2	86.1	88.4	88.1	89.2	91.8	95.6	92.4	
9.3	8.9	10.9	10.1	11.3	9.7	8.3	11.5	11.1	11.6	11.4	11.4	11.7	13.1	14.6	13.2	
6.9	6.5	8.2	7.3	7.3	7.0	6.3	8.7	7.9	8.6	8.0	8.1	7.0	7.7	7.7	7.8	
19.5	5.5	14.3	6.4	9.6	13.5	30.8	8.5	4.5	8.2	6.7	6.8	1.8	4.1	3.9	4.6	
11.9	2.2	9.5	3.0	5.8	8.0	14.3	5.5	2.7	3.6	3.9	4.0	.3	1.5	1.3	2.0	
3.6	2.3	3.0	1.9	3.3	3.1	13.5	.8	.0	2.1	1.1	1.0	1.1	1.1	1.3	1.2	
2.4	.3	1.0	.8	.3	1.4	1.2	.3	.6	.0	.0	.2	.5	.2	.7	.5	
1.6	.7	.8	.6	.3	1.1	1.6	1.9	1.2	2.6	1.6	1.7	.0	1.3	.5	.9	
72.9	84.6	78.7	79.8	81.0	77.6	60.9	82.5	87.9	83.0	84.8	84.7	89.5	84.6	89.5	87.6	
25.8	55.7	48.1	55.1	47.3	40.0	26.5	57.3	77.3	69.1	65.4	66.3	74.6	46.4	64.3	64.2	
16.2	10.8	9.8	6.4	11.3	12.7	20.9	5.8	5.4	4.6	5.7	5.6	10.2	7.0	6.5	6.6	
11.4	10.2	9.0	13.0	11.0	11.0	7.9	9.0	.9	3.1	1.5	3.0	2.6	10.0	10.6	7.4	
15.5	2.3	4.8	2.5	4.7	9.0	3.1	4.9	1.2	3.1	8.4	6.0	.6	19.3	5.5	6.5	
4.0	5.7	7.0	2.8	6.9	4.9	2.6	5.5	3.0	3.1	3.8	3.9	1.5	2.0	2.6	2.8	
7.6	9.9	7.0	13.9	9.3	8.9	8.3	9.0	7.6	8.8	8.5	8.5	8.6	11.3	6.6	7.8	
14.1	3.3	7.8	3.6	5.2	9.1	22.3	4.9	2.4	5.2	3.2	3.6	1.2	2.5	2.2	2.5	
5.4	2.2	6.5	2.8	4.4	4.5	8.5	3.6	2.1	3.1	3.4	3.2	.6	1.6	1.7	2.0	
52.6	67.6	48.9	52.6	57.7	55.8	44.7	56.2	55.0	58.8	57.7	57.0	79.5	70.4	69.6	66.9	
20.2	17.0	29.8	27.1	23.4	21.8	16.2	26.3	32.9	24.2	27.2	27.7	10.0	14.2	19.9	20.7	
17.3	36.3	34.4	21.6	22.4	24.8	50.6	9.3	3.3	7.0	7.6	7.1	20.0	9.7	5.5	8.1	
16.8	44.5	40.5	51.6	47.1	33.0	25.8	59.0	84.1	78.1	68.4	70.3	64.1	45.7	29.8	45.9	
6.6	2.4	8.7	8.4	10.0	6.3	3.3	12.7	3.8	5.3	4.5	6.0	6.0	13.9	41.4	25.3	
53.7	3.7	5.6	1.6	7.1	25.9	11.3	6.8	1.6	1.8	7.1	5.6	2.1	17.9	12.2	9.9	
1.7	3.9	4.6	8.4	3.3	3.4	2.9	5.9	2.7	1.8	5.1	4.5	1.7	5.8	2.4	3.2	
3.8	9.2	6.2	8.4	10.0	6.5	6.0	6.3	4.4	6.1	7.3	6.5	6.0	7.0	8.7	7.6	
20.6	38.5	29.7	35.3	37.1	29.3	23.6	36.1	36.3	46.5	31.1	34.4	51.6	27.6	14.0	25.1	
14.4	19.4	9.2	13.7	12.4	14.8	14.5	10.2	5.5	7.0	8.6	8.2	18.4	12.5	11.5	11.6	
14.0	4.7	9.2	6.3	6.2	9.6	9.7	7.8	10.4	2.6	8.3	8.0	4.8	11.8	11.3	9.7	
9.6	3.0	6.2	2.6	5.2	6.4	5.9	3.9	2.2	.9	5.1	4.0	1.6	9.5	9.7	7.2	
2.4	.4	1.5	.5	1.0	1.5	1.3	1.5	4.4	.9	5.0	3.8	1.4	2.1	2.2	2.5	
35.0	24.7	37.9	33.2	28.1	31.8	39.0	34.1	36.8	36.0	34.7	35.1	16.3	29.5	42.6	36.2	
3.8	9.2	6.2	8.4	10.0	6.5	6.0	6.3	4.4	6.1	7.3	6.5	6.0	7.0	8.7	7.6	
7.1	5.2	5.1	6.3	4.8	6.1	5.8	7.3	7.1	13.2	7.4	8.0	4.8	2.8	4.5	5.2	
20.4	13.5	12.3	18.4	10.5	16.6	15.6	12.7	13.7	12.3	15.2	14.2	13.0	13.0	14.2	13.9	
14.3	14.6	13.3	9.5	15.2	13.9	13.7	10.7	18.1	16.7	13.7	14.2	17.6	14.2	14.2	14.6	
8.7	4.5	4.1	4.2	2.9	6.1	6.3	6.8	6.6	9.6	8.3	7.9	6.0	5.3	7.5	7.2	
13.3	10.7	13.8	16.8	14.3	15.2	13.3	13.2	19.2	16.7	10.6	13.1	14.0	12.8	14.4	13.9	
2.7	2.6	3.1	2.1	3.8	2.8	2.9	7.8	2.7	4.4	4.8	5.0	4.8	6.0	4.3	4.7	
7.4	4.5	2.6	8.9	7.1	6.3	6.3	8.8	9.3	4.4	9.3	8.7	12.6	12.8	8.1	9.2	
3.9	3.0	7.2	2.6	3.8	3.9	4.6	7.3	2.7	3.5	3.5	4.1	3.9	2.8	6.2	5.0	
12.7	6.5	15.4	8.9	9.0	10.6	11.4	10.2	8.2	8.8	9.6	9.4	8.9	8.8	8.2	8.7	
2.8	21.1	15.4	17.4	19.5	12.0	14.6	7.8	5.5	2.6	9.9	8.0	10.3	14.6	10.2	10.1	
6.7	5.8	7.7	4.7	9.0	6.7	5.4	7.3	6.6	7.9	7.8	7.5	4.1	7.0	8.3	7.5	

2/ Statistics are not presented for this group because too few records contained the specific data.

SOURCE: National Research Council, Office of Scientific and Engineering Personnel, Doctorate Records File.

TABLE 2 Statistical Profile of Doctorate Recipients by Field of Doctorate, 1985 1/

Doctorates: Women

	1985 Total	Physics and Astronomy	Chemistry	Earth, Atmospheric and Marine Sciences	Physical Sciences	Mathematics	Computer Sciences	Engineering	EMP Fields	Biochemistry	Other Biosciences	Biosciences	Health Sciences	Agricultural Sciences	Life Sciences
Total Female	10499	102	362	111	575	106	33	198	912	184	1045	1229	434	192	1855
Female as a Percent of Total Doctorates %	34.3	9.5	19.7	18.0	18.3	15.4	10.6	6.3	11.9	31.8	32.8	32.6	59.9	15.3	32.3
U.S. Citizenship %	84.9	60.8	72.1	79.3	71.5	66.0	72.7	60.1	68.4	79.9	83.7	83.2	84.6	69.3	82.0
Non-U.S., Permanent Visa	3.0	5.9	4.7	3.6	4.7	11.3	.0	8.6	6.1	6.5	3.3	3.7	2.3	3.6	3.4
Non-U.S., Temporary Visa	7.8	29.4	18.0	11.7	18.8	20.8	24.2	28.3	21.3	11.4	10.5	10.7	8.3	24.0	11.5
Unknown	4.3	3.9	5.2	5.4	5.0	1.9	3.0	3.0	4.2	2.2	2.5	2.4	4.8	3.1	3.1
Married %	51.6	52.9	41.4	47.7	44.7	57.5	69.7	48.0	47.8	48.9	47.8	48.0	54.8	53.1	50.1
Not Married	42.7	42.2	52.8	45.9	49.6	39.6	27.3	46.5	46.9	47.3	48.3	48.2	38.5	43.2	45.4
Unknown	5.7	4.9	5.8	6.3	5.7	2.8	3.0	5.6	5.3	3.8	3.8	3.8	6.7	3.6	4.5
Median Age at Doctorate	35.1	30.1	28.5	31.0	29.4	30.2	33.5	29.4	29.5	29.6	30.9	30.7	36.5	31.8	31.7
Percent with Bacc in Same Field as Doctorate	52.1	78.5	77.6	53.2	72.3	78.3	9.1	58.6	67.8	22.8	65.8	59.4	62.7	44.8	58.7
Percent with Masters	83.5	69.6	37.6	67.6	49.0	81.1	93.9	87.4	62.7	31.0	52.4	49.2	88.7	91.7	62.9
Median Time Lapse From Bacc to Doct															
Total Time Yrs	11.9	7.7	6.3	8.7	7.0	7.7	11.5	7.1	7.1	7.2	8.4	8.2	13.0	8.9	9.1
Registered Time	7.2	6.6	5.4	6.8	5.9	6.2	6.3	5.8	5.9	6.0	6.5	6.4	6.7	6.2	6.4
Postdoctoral Study Plans %	17.5	48.0	40.3	37.8	41.2	15.1	15.2	19.7	32.6	83.7	66.1	68.8	14.7	27.6	51.9
Fellowship	9.5	18.6	16.6	17.1	17.0	6.6	6.1	8.1	13.5	50.5	40.4	41.9	8.3	7.8	30.5
Research Assoc	5.9	29.4	21.5	18.9	22.4	7.5	9.1	10.6	17.7	25.5	20.9	21.6	5.5	16.7	17.3
Traineeship	1.0	.8	1.7	1.8	1.4	.9	.0	.5	1.1	2.2	1.5	1.6	.2	2.1	1.3
Other	1.2	.0	.6	.0	.3	.0	.0	.5	.3	5.4	3.3	3.7	.7	1.0	2.7
Planned Employment After Doctorate %	74.9	44.1	50.0	54.1	49.7	79.2	75.8	70.2	58.6	13.0	28.1	25.9	78.6	65.1	42.3
Educ Institution	47.0	22.5	11.3	21.6	15.3	64.2	48.5	25.3	24.3	6.5	15.1	13.8	54.6	35.4	25.6
Industry/Business	10.1	10.8	34.0	18.0	26.8	8.5	18.2	31.3	25.3	4.9	6.1	5.9	6.9	12.5	6.8
Government	7.2	6.9	2.8	10.8	5.0	2.8	.0	9.1	5.5	.6	4.2	3.7	7.1	9.4	5.1
Nonprofit	5.8	2.9	.8	.0	1.0	.0	3.0	1.0	1.0	.0	1.4	1.2	7.4	1.6	2.7
Other & Unknown	4.9	1.0	1.1	3.6	1.6	3.8	6.1	3.5	2.4	1.1	1.2	1.2	2.5	6.3	2.0
Postdoc Status Unknown %	7.6	7.8	9.7	8.1	9.0	5.7	9.1	10.1	8.9	3.3	5.7	5.4	6.7	7.3	5.9
Definite Postdoctoral Study	12.1	33.3	29.8	24.3	29.4	13.2	9.1	12.6	23.1	69.0	50.6	53.4	9.9	16.1	39.4
Seeking Postdoctoral Study	5.4	14.7	10.5	13.5	11.8	1.9	6.1	7.1	9.4	14.7	15.5	15.4	4.8	11.5	12.5
Definite Employment	51.6	32.4	36.2	42.3	36.7	58.5	51.5	51.5	43.0	8.2	17.6	16.2	59.7	43.8	29.2
Seeking Employment	23.3	11.8	13.8	11.7	13.0	20.8	24.2	18.7	15.6	4.9	10.5	9.7	18.9	21.4	13.0
Employment Activity After Doctorate															
Primary Activity															
R & D %	16.4	57.6	71.0	44.7	63.0	33.9	17.6	68.6	57.9	46.7	41.8	42.2	29.7	52.4	37.8
Teaching	42.6	27.3	19.8	31.9	23.7	56.5	64.7	24.5	30.9	46.7	37.0	37.7	45.9	22.6	39.3
Administration	15.9	.0	.0	2.1	.5	.0	5.9	1.0	.8	.0	3.8	3.5	10.4	1.2	6.5
Prof. Services	16.8	3.0	4.6	12.8	6.2	4.8	5.9	2.9	5.1	6.7	7.6	7.5	9.7	9.5	8.9
Other	2.9	3.0	3.8	8.5	4.7	.0	.0	1.0	2.8	.0	3.8	3.5	.8	7.1	2.8
Activity Unknown	5.5	9.1	.8	.0	1.9	4.8	5.9	2.0	2.6	.0	6.0	5.5	3.5	7.1	4.8
Secondary Activity															
R & D	27.8	27.3	15.3	36.2	21.8	43.5	52.9	22.5	26.8	33.3	33.2	33.2	39.4	25.0	34.9
Teaching	12.4	12.1	3.1	8.5	5.7	21.0	5.9	11.8	9.7	.0	9.8	9.0	18.1	17.9	14.8
Administration	8.9	6.1	12.2	4.3	9.5	3.2	11.8	7.8	8.2	.0	4.3	4.0	8.5	9.5	7.0
Prof. Services	8.2	.0	3.1	4.3	2.8	6.5	5.9	6.9	4.6	.0	6.5	6.0	8.9	7.1	7.6
Other	2.7	.0	1.5	2.1	1.4	3.2	.0	1.0	1.5	.0	1.6	1.5	1.9	.0	1.5
No Secondary Activity	34.5	45.5	64.1	44.7	56.9	17.7	17.6	48.0	46.7	66.7	38.6	40.7	19.7	33.3	29.5
Unknown	5.5	9.1	.8	.0	1.9	4.8	5.9	2.0	2.6	.0	6.0	5.5	3.5	7.1	4.8
Region of Employment After Doctorate															
New England %	6.1	6.1	8.4	10.6	8.5	9.7	23.5	6.9	8.9	.0	4.9	4.5	3.5	4.8	4.1
Middle Atlantic	15.9	15.2	26.0	14.9	21.8	19.4	11.8	17.6	19.9	26.7	11.4	12.6	17.0	6.0	13.7
East No Central	13.6	12.1	15.3	6.4	12.8	19.4	.0	9.8	12.5	20.0	15.2	15.6	13.5	14.3	14.4
West No Central	6.7	6.1	6.1	4.3	5.7	8.1	.0	4.9	5.6	6.7	7.6	7.5	4.6	7.1	6.1
South Atlantic	16.7	15.2	19.1	14.9	17.5	14.5	11.8	22.5	18.1	6.7	22.3	21.1	14.7	15.5	17.2
East So Central	4.4	.0	1.5	2.1	1.4	3.2	11.8	2.9	2.6	.0	3.8	3.5	5.8	6.0	5.0
West So Central	8.2	6.1	5.3	14.9	7.6	3.2	11.8	2.0	5.6	6.7	4.3	4.5	12.4	7.1	8.7
Mountain	4.4	9.1	.0	4.3	2.4	.0	.0	2.9	2.0	.0	4.3	4.0	6.2	1.2	4.6
Pacific & Insular	10.2	9.1	11.5	12.8	11.4	8.1	11.8	15.7	12.0	13.3	14.1	14.1	7.7	7.1	10.0
Foreign	5.5	9.1	3.1	8.5	5.2	11.3	5.9	10.8	7.7	20.0	9.2	10.1	9.7	23.8	12.0
Region Unknown	8.4	12.1	3.8	6.4	5.7	3.2	11.8	3.9	5.1	.0	2.7	2.5	5.0	7.1	4.4

1/ Refer to explanatory note on pages 38-39 and the description of doctoral fields inside back cover.

TABLE 2 (Continued)

Doctorates: Women

Psychology	Economics	Anthropology and Sociology	Political Sci. and International Rel.	Other Social Sciences	Social Sciences Incl. Psychology	Total Sciences	History	Eng. and Amer. Lang. and Lit.	Foreign Lang. and Lit.	Other Humanities	Humanities	Business and Management	Other Professional Fields	Education	Total Non-Sciences	Other or Unspecified 2/
1519	124	415	124	170	2352	5119	178	397	241	673	1489	144	451	3480	5564	16
49.4	15.3	51.0	25.6	31.8	41.1	26.7	32.8	54.5	55.4	39.1	43.4	18.2	42.4	51.8	46.4	44.4
91.6	66.1	87.2	73.4	76.5	87.4	82.1	82.0	90.7	77.2	82.8	83.9	79.9	83.4	89.8	87.5	
1.9	8.9	2.9	4.0	4.1	2.7	3.6	5.6	2.8	11.2	4.3	5.2	3.5	2.0	1.4	2.5	
1.8	21.0	6.3	10.5	12.9	4.9	10.2	5.1	3.8	6.6	8.3	6.4	11.8	6.7	4.8	5.6	
4.7	4.0	3.6	12.1	6.5	5.0	4.1	7.3	2.8	5.0	4.6	4.5	4.9	8.0	4.0	4.5	
46.9	50.0	48.9	42.7	47.6	47.2	48.4	52.2	53.9	54.8	48.9	51.6	48.6	47.5	57.2	54.7	
47.0	43.5	46.3	41.9	43.5	46.2	46.0	40.4	42.1	38.2	44.7	42.4	45.1	43.9	37.5	39.5	
6.1	6.5	4.8	15.3	8.8	6.6	5.6	7.3	4.0	7.1	6.4	6.0	6.3	8.6	5.3	5.8	
32.7	30.9	36.1	34.6	35.0	33.3	31.9	35.5	35.8	35.3	34.8	35.2	35.2	38.1	39.3	38.0	
62.3	66.1	53.3	54.0	19.4	57.4	59.7	62.9	70.0	63.1	49.9	59.0	29.2	23.9	42.7	45.2	
83.0	69.4	88.9	81.5	88.2	83.6	72.4	89.9	88.4	85.9	88.1	88.0	91.7	94.5	96.3	93.8	
9.4	8.4	12.3	12.1	11.9	10.2	9.1	12.1	12.6	12.2	12.2	12.3	12.5	14.8	15.7	14.6	
7.0	6.6	8.8	8.4	7.5	7.3	6.7	9.0	8.8	8.9	8.2	8.6	6.9	7.2	7.5	7.8	
18.3	7.3	12.5	8.9	7.6	15.4	31.7	10.1	2.3	5.8	7.3	6.0	2.1	2.7	4.1	4.5	
10.7	4.8	8.2	3.2	4.7	9.1	17.6	7.3	1.5	2.9	4.3	3.7	.7	1.1	1.4	2.0	
3.2	.8	3.4	5.6	2.9	3.2	10.9	1.7	.5	.8	1.9	1.3	1.4	.7	1.3	1.2	
3.5	.0	.2	.0	.0	2.3	1.7	.0	.0	.0	.0	.0	.0	.0	.5	.3	
1.0	1.6	.7	.0	.0	.9	1.4	1.1	.3	2.1	1.0	1.0	.0	.9	.9	.9	
74.5	85.5	79.8	75.0	82.9	76.6	60.9	77.5	90.9	83.0	84.4	85.1	88.9	86.5	89.0	87.7	
26.5	44.4	50.4	50.8	44.1	34.2	29.3	59.0	74.3	67.2	62.6	66.0	72.9	61.2	61.9	63.2	
14.0	11.3	7.7	8.1	8.2	12.0	12.5	2.8	7.3	5.8	8.0	6.9	14.6	10.0	7.7	7.8	
10.9	21.0	6.5	7.3	11.2	10.5	7.6	1.1	1.5	2.1	2.1	1.8	.7	5.1	9.4	6.8	
16.8	3.2	8.0	1.6	7.6	13.1	7.1	7.9	1.8	.4	6.5	4.4	.7	5.8	4.7	4.6	
6.4	5.6	7.2	7.3	11.8	6.9	4.4	6.7	6.0	7.5	5.2	6.0	.0	4.4	5.3	5.3	
7.2	7.3	7.7	16.1	9.4	8.0	7.4	12.4	6.8	11.2	8.3	8.9	9.0	10.9	6.9	7.8	
11.9	4.0	5.8	6.5	4.1	9.6	22.8	6.2	1.0	2.5	3.9	3.2	1.4	1.3	2.0	2.2	
6.4	3.2	6.7	2.4	3.5	5.9	8.9	3.9	1.3	3.3	3.4	2.9	.7	1.3	2.1	2.2	
51.5	66.1	46.3	48.4	44.1	50.7	41.5	50.0	57.7	55.6	50.2	53.1	74.3	60.8	63.6	60.9	
22.9	19.4	33.5	26.6	38.8	25.9	19.4	27.5	33.2	27.4	34.2	32.0	14.6	25.7	25.3	26.9	
14.6	51.2	28.1	10.0	29.3	20.0	31.5	10.1	4.8	3.0	8.9	6.8	25.2	11.7	5.6	7.0	
17.0	40.2	50.0	53.3	40.0	27.2	31.0	64.0	78.2	80.6	72.2	74.4	58.9	52.9	40.3	49.9	
5.7	.0	10.4	13.3	9.3	6.7	5.6	13.5	6.1	.7	4.1	5.2	2.8	14.2	30.5	22.4	
56.3	2.4	6.8	8.3	8.0	39.2	25.2	3.4	3.1	2.2	5.9	4.2	5.6	12.4	14.3	11.5	
2.6	2.4	2.1	5.0	10.7	3.1	3.0	3.4	2.6	3.7	5.0	3.9	3.7	2.2	2.4	2.8	
3.8	3.7	2.6	10.0	2.7	3.9	3.9	5.6	5.2	9.7	3.8	5.4	3.7	6.6	7.0	6.5	
20.8	36.6	40.1	41.7	34.7	26.9	28.9	42.7	41.5	38.8	39.9	40.5	50.5	33.6	20.2	27.0	
16.0	14.6	13.5	6.7	17.3	15.1	14.0	9.0	7.4	3.7	8.6	7.5	25.2	13.5	11.8	11.4	
10.5	6.1	13.0	6.7	2.7	9.9	8.8	6.7	6.1	6.0	7.4	6.7	2.8	7.3	10.3	9.0	
10.1	8.5	5.7	.0	8.0	8.6	7.6	1.1	2.2	.7	5.9	3.4	3.7	9.5	10.4	8.5	
4.3	2.4	3.1	1.7	.0	3.6	2.7	2.2	2.2	.7	7.1	4.1	.9	2.6	2.4	2.8	
34.5	28.0	21.9	33.3	34.7	32.0	34.1	32.6	35.4	40.3	27.2	32.4	13.1	27.0	37.8	34.9	
3.8	3.7	2.6	10.0	2.7	3.9	3.9	5.6	5.2	9.7	3.8	5.4	3.7	6.6	7.0	6.5	
6.4	8.5	7.8	5.0	10.7	7.0	6.6	13.5	3.9	11.2	10.4	9.0	6.5	5.8	4.7	5.8	
21.1	23.2	19.8	21.7	16.0	20.7	18.8	19.1	12.7	17.9	15.7	15.6	7.5	17.9	13.5	14.1	
13.9	12.2	16.1	13.3	12.0	14.0	13.8	12.4	14.0	11.2	13.0	12.9	16.8	14.2	13.3	13.4	
5.5	4.9	4.2	3.3	4.0	5.0	5.4	2.2	8.7	11.2	7.7	8.0	4.7	6.6	7.5	7.4	
12.9	26.8	14.1	20.0	18.7	14.8	16.0	16.9	16.2	14.2	10.9	13.7	15.9	18.6	18.1	17.1	
4.3	2.4	2.1	3.3	1.3	3.6	3.8	2.2	6.6	4.5	2.4	3.9	6.5	3.3	5.3	4.9	
8.2	1.2	6.3	3.3	4.0	6.9	7.1	3.4	9.6	4.5	6.8	6.8	15.9	6.6	9.5	8.9	
4.2	4.9	6.3	5.0	2.7	4.5	4.1	3.4	4.8	.0	4.7	3.8	3.7	4.0	4.9	4.5	
12.3	4.9	10.9	3.3	10.7	11.0	10.9	16.9	11.8	10.4	9.2	11.0	14.0	11.3	8.8	9.7	
1.8	8.5	7.8	8.3	12.0	4.2	6.8	5.6	4.4	2.2	8.9	6.1	4.7	6.2	4.1	4.8	
9.5	2.4	4.7	13.3	8.0	8.3	6.7	4.5	7.4	12.7	10.4	9.2	3.7	5.5	10.2	9.4	

2/ Statistics are not presented for this group because too few records contained the specific data.

SOURCE: National Research Council, Office of Scientific and Engineering Personnel, Doctorate Records File.

TABLE 3 Sources of Support in Graduate School of Doctorate Recipients by Sex and Summary Field, 1985

Sources of Support in Graduate School		Total	Physical Sciences[1]	Engineering	Life Sciences	Social Sciences	Humanities	Prof. Fields	Education
		Men/Women	Men/Women	Men/Women	Men/Women	Men/Women	Men/Women	Men/Women	Men/Women
NSF Fellowship	N	393/ 161	147/ 32	69/ 4	90/ 62	71/ 49	7/ 5	2/ 1	7/ 8
	V%	2.1/ 1.6	4.1/ 4.8	2.5/ 2.2	2.5/ 3.5	2.3/ 2.2	.4/ .4	.2/ .2	.2/ .2
	H%[2]	100.0/100.0	37.4/ 19.9	17.6/ 2.5	22.9/ 38.5	18.1/ 30.4	1.8/ 3.1	.5/ .6	1.8/ 5.0
NIH Traineeship	N	919/ 651	50/ 15	20/ 6	645/ 407	185/ 185	3/ 1	8/ 15	8/ 21
	V%	4.8/ 6.5	1.4/ 2.2	.7/ 3.2	17.6/ 22.9	6.0/ 8.4	.2/ .1	.7/ 2.8	.3/ .6
	H%	100.0/100.0	5.4/ 2.3	2.2/ .9	70.2/ 62.5	20.1/ 28.4	.3/ .2	.9/ 2.3	.9/ 3.2
Other Department of Health & Human Servs.[3]	N	193/ 296	9/ 1	2/ 0	50/ 75	114/ 165	2/ 3	9/ 33	7/ 17
	V%	1.0/ 2.9	.2/ .1	.1/ .0	1.4/ 4.2	3.7/ 7.5	.1/ .2	.8/ 6.1	.2/ .5
	H%	100.0/100.0	4.7/ .3	1.0/ .0	25.9/ 25.3	59.1/ 55.7	1.0/ 1.0	4.7/ 11.1	3.6/ 5.7
Graduate & Prof. Opportunities Program	N	95/ 96	15/ 14	11/ 4	23/ 27	21/ 20	9/ 12	5/ 5	11/ 14
	V%	.5/ 1.0	.4/ 2.1	.4/ 2.2	.6/ 1.5	.7/ .9	.5/ .9	.4/ .9	.4/ .4
	H%	100.0/100.0	15.8/ 14.6	11.6/ 4.2	24.2/ 28.1	22.1/ 20.8	9.5/ 12.5	5.3/ 5.2	11.6/ 14.6
Other Department of Education[4]	N	185/ 137	8/ 1	4/ 0	9/ 3	42/ 41	77/ 46	5/ 2	40/ 44
	V%	1.0/ 1.4	.2/ .1	.1/ .0	.2/ .2	1.4/ 1.9	4.3/ 3.3	.4/ .4	1.3/ 1.3
	H%	100.0/100.0	4.3/ .7	2.2/ .0	4.9/ 2.2	22.7/ 29.9	41.6/ 33.6	2.7/ 1.5	21.6/ 32.1
GI Bill	N	924/ 66	70/ 1	43/ 0	112/ 13	172/ 21	128/ 4	125/ 4	271/ 23
	V%	4.8/ .7	1.9/ .1	1.6/ .0	3.0/ .7	5.5/ 1.0	7.1/ .3	10.8/ .7	8.9/ .7
	H%	100.0/100.0	7.6/ 1.5	4.7/ .0	12.1/ 19.7	18.6/ 31.8	13.9/ 6.1	13.5/ 6.1	29.3/ 34.8
Other Federal Support	N	728/ 366	118/ 19	128/ 7	171/ 85	135/ 99	72/ 64	37/ 15	66/ 76
	V%	3.8/ 3.6	3.3/ 2.8	4.7/ 3.8	4.7/ 4.8	4.4/ 4.5	4.0/ 4.6	3.2/ 2.8	2.2/ 2.3
	H%	100.0/100.0	16.2/ 5.2	17.6/ 1.9	23.5/ 23.2	18.5/ 27.0	9.9/ 17.5	5.1/ 4.1	9.1/ 20.8
Nat'l Fellowship (non-federal)	N	638/ 507	96/ 39	65/ 16	115/ 63	145/ 144	130/ 142	38/ 29	49/ 74
	V%	3.3/ 5.0	2.7/ 5.8	2.4/ 8.6	3.1/ 3.6	4.7/ 6.5	7.2/ 10.1	3.3/ 5.4	1.6/ 2.2
	H%	100.0/100.0	15.0/ 7.7	10.2/ 3.2	18.0/ 12.4	22.7/ 28.4	20.4/ 28.0	6.0/ 5.7	7.7/ 14.6
Teaching Assistantship	N	9330/ 4463	2557/ 488	1125/ 79	1452/ 724	1713/ 1147	1220/ 986	553/ 230	702/ 802
	V%	48.7/ 44.2	70.8/ 72.7	41.3/ 42.7	39.5/ 40.8	55.2/ 52.1	67.7/ 70.2	47.8/ 42.8	23.0/ 24.3
	H%	100.0/100.0	27.4/ 10.9	12.1/ 1.8	15.6/ 16.2	18.4/ 25.7	13.1/ 22.1	5.9/ 5.2	7.5/ 18.0
Research Assistantship	N	9014/ 3193	2672/ 463	1995/ 135	2093/ 899	1230/ 807	258/ 231	292/ 143	468/ 506
	V%	47.1/ 31.6	74.0/ 69.0	73.2/ 73.0	57.0/ 50.7	39.6/ 36.7	14.3/ 16.4	25.2/ 26.6	15.3/ 15.3
	H%	100.0/100.0	29.6/ 14.5	22.1/ 4.2	23.2/ 28.2	13.6/ 25.3	2.9/ 7.2	3.2/ 4.5	5.2/ 15.8
University Fellowship	N	3956/ 2154	803/ 183	470/ 53	709/ 381	796/ 522	659/ 560	235/ 114	281/ 339
	V%	20.7/ 21.3	22.2/ 27.3	17.2/ 28.6	19.3/ 21.5	25.7/ 23.7	36.6/ 39.9	20.3/ 21.2	9.2/ 10.3
	H%	100.0/100.0	20.3/ 8.5	11.9/ 2.5	17.9/ 17.7	20.1/ 24.2	16.7/ 26.0	5.9/ 5.3	7.1/ 15.7
College Work-Study	N	770/ 441	80/ 13	35/ 1	144/ 58	227/ 144	146/ 118	32/ 20	104/ 85
	V%	4.0/ 4.4	2.2/ 1.9	1.3/ .5	3.9/ 3.3	7.3/ 6.5	8.1/ 8.4	2.8/ 3.7	3.4/ 2.6
	H%	100.0/100.0	10.4/ 2.9	4.5/ .2	18.7/ 13.2	29.5/ 32.7	19.0/ 26.8	4.2/ 4.5	13.5/ 19.3
Other University Related	N	1087/ 911	103/ 37	90/ 6	221/ 134	218/ 206	155/ 122	73/ 52	226/ 352
	V%	5.7/ 9.0	2.9/ 5.5	3.3/ 3.2	6.0/ 7.6	7.0/ 9.4	8.6/ 8.7	6.3/ 9.7	7.4/ 10.7
	H%	100.0/100.0	9.5/ 4.1	8.3/ .7	20.3/ 14.7	20.1/ 22.6	14.3/ 13.4	6.7/ 5.7	20.8/ 38.6
Business/Employer Funds	N	1031/ 488	124/ 25	195/ 15	119/ 68	118/ 65	67/ 35	105/ 37	302/ 242
	V%	5.4/ 4.8	3.4/ 3.7	7.2/ 8.1	3.2/ 3.8	3.8/ 3.0	3.7/ 2.5	9.1/ 6.9	9.9/ 7.3
	H%	100.0/100.0	12.0/ 5.1	18.9/ 3.1	11.5/ 13.9	11.4/ 13.3	6.5/ 7.2	10.2/ 7.6	29.3/ 49.6
Own Earnings	N	10925/ 6840	1295/ 236	1016/ 65	1716/ 853	2159/ 1531	1330/ 983	808/ 390	2588/ 2774
	V%	57.1/ 67.8	35.9/ 35.2	37.3/ 35.1	46.7/ 48.1	69.6/ 69.6	73.8/ 70.0	69.8/ 72.5	84.7/ 84.0
	H%	100.0/100.0	11.9/ 3.5	9.3/ 1.0	15.7/ 12.5	19.8/ 22.4	12.2/ 14.4	7.4/ 5.7	23.7/ 40.6
Spouse's Earnings	N	5578/ 3592	791/ 158	468/ 38	1200/ 558	991/ 742	667/ 554	371/ 192	1083/ 1347
	V%	29.1/ 35.6	21.9/ 23.5	17.2/ 20.5	32.7/ 31.5	31.9/ 33.7	37.0/ 39.4	32.1/ 35.7	35.5/ 40.8
	H%	100.0/100.0	14.2/ 4.4	8.4/ 1.1	21.5/ 15.5	17.8/ 20.7	12.0/ 15.4	6.7/ 5.3	19.4/ 37.5
Family Support	N	4734/ 2336	818/ 143	709/ 35	955/ 431	923/ 663	579/ 388	245/ 134	500/ 540
	V%	24.7/ 23.2	22.7/ 21.3	26.0/ 18.9	26.0/ 24.3	29.7/ 30.1	32.1/ 27.6	21.2/ 24.9	16.4/ 16.4
	H%	100.0/100.0	17.3/ 6.1	15.0/ 1.5	20.2/ 18.5	19.5/ 28.4	12.2/ 16.6	5.2/ 5.7	10.6/ 23.1
Guaranteed Student Loans	N	4171/ 2642	545/ 100	261/ 23	856/ 426	1118/ 830	456/ 350	251/ 159	679/ 745
	V%	21.8/ 26.2	15.1/ 14.9	9.6/ 12.4	23.3/ 24.0	36.0/ 37.7	25.3/ 24.9	21.7/ 29.6	22.2/ 22.6
	H%	100.0/100.0	13.1/ 3.8	6.3/ .9	20.5/ 16.1	26.8/ 31.4	10.9/ 13.2	6.0/ 6.0	16.3/ 28.2
National Direct Student Loans	N	1289/ 790	114/ 15	61/ 5	214/ 94	418/ 288	235/ 175	71/ 35	176/ 178
	V%	6.7/ 7.8	3.2/ 2.2	2.2/ 2.7	5.8/ 5.3	13.5/ 13.1	13.0/ 12.5	6.1/ 6.5	5.8/ 5.4
	H%	100.0/100.0	8.8/ 1.9	4.7/ .6	16.6/ 11.9	32.4/ 36.5	18.2/ 22.2	5.5/ 4.4	13.7/ 22.5
Other Loans	N	599/ 393	47/ 8	54/ 4	113/ 48	138/ 99	88/ 77	33/ 26	126/ 130
	V%	3.1/ 3.9	1.3/ 1.2	2.0/ 2.2	3.1/ 2.7	4.4/ 4.5	4.9/ 5.5	2.9/ 4.8	4.1/ 3.9
	H%	100.0/100.0	7.8/ 2.0	9.0/ 1.0	18.9/ 12.2	23.0/ 25.2	14.7/ 19.6	5.5/ 6.6	21.0/ 33.1
Other	N	1367/ 588	176/ 52	237/ 12	321/ 114	200/ 116	106/ 73	117/ 33	209/ 187
	V%	7.1/ 5.8	4.9/ 7.7	8.7/ 6.5	8.7/ 6.4	6.4/ 5.3	5.9/ 5.2	10.1/ 6.1	6.8/ 5.7
	H%	100.0/100.0	12.9/ 8.8	17.3/ 2.0	23.5/ 19.4	14.6/ 19.7	7.8/ 12.4	8.6/ 5.6	15.3/ 31.8
Unduplicated Total[5]	N	19147/10090	3611/ 671	2727/ 185	3673/ 1774	3103/ 2201	1803/ 1405	1157/ 538	3055/ 3301

1/ Includes mathematics and computer sciences.
2/ V denotes vertical percentage; H denotes horizontal percentage.
3/ Includes ADAMHA Traineeships and Fellowships.
4/ Includes Title IV Foreign Language and Area Studies Fellowships.
5/ The 1,964 Ph.D.s who did not report sources of support are omitted from this table.

SOURCE: National Research Council, Office of Scientific and Engineering Personnel, Doctorate Records File.

TABLE 4 State of Doctoral Institution of Doctorate Recipients by Sex and Summary Field, 1985

State of Doctoral Institution	Total		Field of Doctorate: Physical Sciences 1/		Engineering		Life Sciences		Social Sciences		Humanities		Prof. Fields		Education	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
U.S. Total	20502	10699	3817	716	2967	198	3893	1855	3368	2352	1939	1489	1261	595	3237	3480
Alabama	145	116	13	2	17	1	38	31	14	11	6	6	10	3	47	62
Alaska	7	1	4	1	0	0	3	0	0	0	0	0	0	0	0	0
Arizona	285	140	77	9	30	0	56	21	29	25	23	12	13	3	56	69
Arkansas	86	42	5	4	6	1	31	4	5	5	4	3	15	5	20	20
California	2379	1170	600	89	431	32	363	226	429	335	207	198	118	47	229	240
Colorado	397	161	85	10	56	3	87	20	48	37	25	27	15	15	81	49
Connecticut	287	171	59	14	29	3	55	37	56	33	59	48	5	5	24	31
Delaware	64	29	22	4	19	3	2	3	8	10	7	4	1	0	5	5
D. C.	298	211	26	9	24	2	44	33	76	45	47	39	38	26	43	56
Florida	638	369	74	15	53	3	114	28	93	64	28	30	65	23	211	206
Georgia	398	256	48	12	31	4	97	30	67	54	24	24	35	13	96	118
Hawaii	99	39	18	4	5	0	30	8	27	12	13	11	0	0	6	4
Idaho	39	15	4	2	6	0	15	3	4	1	3	0	0	0	7	9
Illinois	1228	613	217	58	211	15	185	91	216	139	152	80	80	45	166	184
Indiana	668	304	118	28	108	3	118	41	88	60	87	59	48	17	101	96
Iowa	410	138	65	13	62	2	111	35	32	15	50	23	20	4	70	46
Kansas	299	162	31	11	29	1	92	26	51	23	38	16	6	9	52	76
Kentucky	141	56	11	1	7	0	48	10	26	17	25	8	12	4	12	16
Louisiana	183	70	33	7	16	2	42	10	10	16	28	13	36	2	18	20
Maine	16	6	1	0	3	0	5	1	5	3	0	0	0	0	2	2
Maryland	367	304	90	25	46	9	83	81	56	59	43	29	8	18	37	81
Massachusetts	1120	597	291	66	214	20	149	83	176	131	98	74	55	27	136	196
Michigan	828	381	115	16	124	9	170	62	164	90	66	61	35	16	154	127
Minnesota	366	149	51	5	57	1	113	44	56	29	36	26	24	5	28	39
Mississippi	152	75	9	1	7	0	29	9	32	13	8	5	22	4	45	43
Missouri	355	167	44	6	47	1	74	27	65	42	32	22	24	12	69	57
Montana	36	15	9	2	1	0	11	2	6	4	1	0	0	0	8	7
Nebraska	120	76	13	2	6	1	44	16	13	11	7	12	11	3	25	31
Nevada	13	18	3	0	0	0	2	1	5	6	0	1	0	0	3	10
New Hampshire	35	14	16	3	4	0	8	4	5	7	2	0	0	0	0	0
New Jersey	449	194	115	15	68	5	73	35	65	31	63	35	26	9	39	64
New Mexico	132	51	33	1	24	2	22	5	17	12	16	6	2	0	18	25
New York	2010	1274	379	51	262	18	324	212	427	376	239	232	107	65	271	319
North Carolina	426	257	78	19	54	8	123	76	74	52	35	35	19	11	41	56
North Dakota	34	30	3	0	0	0	16	8	7	3	0	3	1	0	7	16
Ohio	814	443	145	38	131	4	132	54	129	106	69	54	58	39	150	145
Oklahoma	264	122	23	3	45	1	51	23	36	12	15	9	14	15	80	59
Oregon	248	121	47	7	18	1	85	23	33	23	10	14	7	5	47	47
Pennsylvania	1152	588	222	39	194	19	131	82	181	106	103	70	94	41	226	230
Rhode Island	137	63	55	12	15	0	20	15	16	19	31	17	0	0	0	0
South Carolina	148	66	36	6	23	1	31	10	17	11	7	8	15	4	19	26
South Dakota	34	14	0	0	0	0	10	1	3	3	0	0	0	0	21	10
Tennessee	323	201	23	6	43	1	68	27	63	43	28	20	19	6	79	98
Texas	1161	634	194	47	173	4	217	132	157	104	81	66	134	50	204	231
Utah	270	88	45	2	42	2	38	15	53	19	11	7	9	6	71	37
Vermont	13	15	5	2	2	0	3	4	3	7	0	2	0	0	0	0
Virginia	392	207	62	10	78	7	74	47	61	40	25	16	26	9	66	77
Washington	349	155	70	14	36	3	106	35	54	30	28	19	8	12	46	42
West Virginia	73	42	10	1	13	0	12	5	14	8	3	0	1	0	20	28
Wisconsin	559	240	111	14	92	6	127	58	85	48	53	35	25	17	66	62
Wyoming	50	16	7	4	5	0	10	1	11	2	2	1	0	0	15	8
Puerto Rico	5	13	3	4	0	0	1	0	0	0	1	9	0	0	0	0

1/ Includes mathematics and computer sciences.

SOURCE: National Research Council, Office of Scientific and Engineering Personnel, Doctorate Records File.

TABLE 5 Statistical Profile of Doctorate Recipients by Racial/Ethnic Group and U.S. Citizenship Status, 1985[1/]

		Total				American Indian	Asian				Black			
		U.S.	Non-U.S. Perm.	Non-U.S. Temp.	Total	Total	U.S.	Non-U.S. Perm.	Non-U.S. Temp.	Total	U.S.	Non-U.S. Perm.	Non-U.S. Temp.	Total
Total Number		23241	1320	5214	31201[2/]	93	515	552	2522[2/]	3636	909	131	393	1435[2/]
Male	%	60.9	75.6	84.0	65.7	41.9	63.7	79.0	84.6	80.8	41.6	89.3	89.6	59.1
Female		39.1	24.4	16.0	34.3	58.1	36.3	21.0	15.4	19.2	58.4	10.7	10.4	40.9
Doctoral Field														
Physical Sciences[3/]	%	13.1	17.6	20.4	14.5	4.3	19.4	21.7	23.1	22.2	3.3	8.4	6.4	4.6
Engineering		5.5	23.9	27.1	10.1	1.1	17.5	34.6	33.6	31.7	2.1	11.5	9.7	5.0
Life Sciences		19.1	14.3	17.7	18.4	19.4	24.9	14.9	16.0	16.9	7.7	21.4	23.2	13.2
Social Sciences		19.5	15.8	12.8	18.3	18.3	12.0	10.1	11.0	11.0	19.1	23.7	17.8	19.2
Humanities		12.3	11.4	5.1	11.0	8.6	8.3	4.3	3.2	4.2	7.4	6.1	6.9	7.1
Education		24.7	9.7	10.9	21.5	41.9	13.4	5.3	7.2	7.8	52.3	21.4	27.2	42.6
Professional/Other		5.8	7.3	6.0	6.1	6.5	4.5	9.1	5.9	6.2	8.1	7.6	8.9	8.3
Median Age at Doctorate		33.5	33.1	32.7	33.3	35.9	32.6	32.7	32.4	32.4	37.7	34.8	34.9	36.6
Median Time Lapse BA-PhD														
Total Time	Yrs	10.5	9.7	9.3	10.2	11.0	9.7	10.1	9.4	9.6	14.4	8.8	9.0	11.9
Registered Time		7.0	6.7	6.0	6.8	6.6	6.8	6.8	6.1	6.3	7.8	6.6	5.6	6.8
Graduate School Support														
Federal Fellow/Trainee	%	16.0	5.7	5.8	13.1	21.5	21.2	5.3	4.8	7.2	18.9	3.8	10.2	15.1
GI Bill		4.2	.2	.1	3.1	5.4	1.4	.2	.0	.2	3.7	.0	.0	2.4
National Fellowship		3.8	2.5	4.0	3.6	7.5	4.5	1.3	3.8	3.4	8.3	4.6	7.6	7.7
Teaching Assistantship		46.6	51.9	41.2	43.8	35.5	47.4	50.9	43.7	44.7	26.1	45.8	31.0	29.2
Research Assistantship		37.8	51.1	50.5	38.8	31.2	51.1	63.4	60.3	58.7	16.8	33.6	27.5	21.3
Other University		29.5	28.3	22.9	27.1	21.5	29.5	24.3	21.5	22.8	32.0	29.0	23.2	29.3
Business/Employer		5.5	2.3	3.6	4.8	3.2	5.2	2.4	2.3	2.7	5.5	3.8	6.1	5.5
Self/Family Sources		81.8	71.6	50.3	72.4	81.7	71.8	65.4	49.8	54.6	82.0	82.4	52.2	73.7
Guaranteed Student Loan		28.1	17.9	.8	21.8	33.3	24.7	12.0	.6	5.7	27.8	36.6	1.5	21.4
Other Loans		11.1	7.4	2.0	8.9	11.8	11.5	5.1	1.2	3.2	15.8	16.8	2.5	12.3
Other		3.3	6.5	20.8	6.2	.0	2.3	2.9	12.6	9.5	3.6	5.3	29.3	10.7
Unknown		1.6	1.0	3.6	6.3	.0	1.2	.7	2.3	3.1	1.7	1.5	3.6	2.3
Postdoctoral Plans														
Postdoctoral Study	%	20.3	19.8	28.6	20.8	18.3	30.5	20.5	32.8	30.1	8.4	13.0	20.1	12.0
Planned Employment		76.8	76.5	64.3	71.2	78.5	65.6	77.0	60.8	63.2	86.7	83.2	74.8	83.0
Educ. Institution		44.4	39.6	39.1	41.3	49.5	29.9	28.6	36.5	33.9	58.5	51.9	45.0	54.1
Industry/Business		14.9	27.0	11.7	14.2	16.1	22.1	38.8	14.4	19.0	6.5	16.8	5.1	7.0
Government		8.2	2.9	7.9	7.5	7.5	6.8	2.7	5.3	5.1	11.4	5.3	15.3	11.9
Non-profit		5.7	2.7	2.4	4.7	5.4	3.9	2.9	2.2	2.5	4.4	1.5	3.8	4.0
Other & Unknown		3.6	4.2	3.3	3.4	.0	2.9	4.0	2.5	2.7	5.8	7.6	5.6	5.9
Postdoct Status Unknown	%	2.9	3.6	7.0	8.0	3.2	3.9	2.5	6.5	6.7	5.0	3.8	5.1	5.0
Definite Postdoct Study	%	15.3	11.8	16.7	14.7	14.0	20.4	11.6	19.5	18.2	5.7	7.6	8.1	6.6
Seeking Postdoct Study		5.0	8.0	11.9	6.1	4.3	10.1	8.9	13.3	12.0	2.6	5.3	12.0	5.4
Definite Employment		56.5	45.2	45.5	51.7	59.1	45.2	45.5	42.6	42.9	60.2	35.1	46.3	54.0
Seeking Employment		20.3	31.3	18.8	19.6	19.4	20.4	31.5	18.2	20.3	26.5	48.1	28.5	29.0
Employment Location after Doctorate														
U.S.	%[4/]	92.0	81.7	31.8	82.8	89.1	88.0	82.1	39.7	53.7	87.0	73.9	16.5	69.7
Foreign		1.3	10.9	59.9	10.3	.0	4.3	8.8	50.6	36.9	.2	23.9	73.1	18.7
Unknown		6.7	7.4	8.3	7.0	10.9	7.7	9.2	9.8	9.4	12.8	2.2	10.4	11.6

1/ See discussion on page 39 for description of past changes in the survey question on racial/ethnic group.
2/ Includes individuals who did not report their citizenship at time of doctorate.
3/ Includes mathematics and computer sciences.
4/ The base for this percentage is the number of doctorates in the column caption group who have found definite employment.

TABLE 5 (Continued)

White				Puerto Rican	Mexican-American				Other Hispanic				Other & Unknown		
U.S.	Non-U.S. Perm.	Non-U.S. Temp.	Total	Total	U.S.	Non-U.S. Perm.	Non-U.S. Temp.	Total	U.S.	Non-U.S. Perm.	Non-U.S. Temp.	Total	U.S.	Non-U.S.	Total
20641	533	1560	227502/	145	180	11	22	2132/	234	61	337	6382/	524	412	22912/
61.8	68.9	81.2	63.3	44.1	60.0	72.7	77.3	62.4	53.8	68.9	81.9	69.9	69.7	88.8	71.5
38.2	31.1	18.8	36.7	55.9	40.0	27.3	22.7	37.6	46.2	31.1	18.1	30.1	30.3	11.2	28.5
13.4	15.9	20.8	14.0	5.5	8.3	27.3	18.2	10.3	8.1	14.8	20.8	15.4	19.5	15.3	15.1
5.3	17.1	22.9	6.8	3.4	2.2	18.2	18.2	4.7	3.0	6.6	17.8	11.1	10.7	28.4	13.4
19.6	12.2	16.5	19.2	12.4	8.9	9.1	40.9	12.2	17.5	19.7	30.9	24.6	17.6	14.1	15.3
19.7	18.9	13.7	19.2	17.2	23.9	9.1	13.6	22.1	22.6	19.7	10.4	15.8	20.2	18.4	21.0
12.4	18.4	7.8	12.3	13.1	12.2	18.2	4.5	11.7	23.5	24.6	5.3	14.3	13.0	4.4	10.5
23.8	10.9	11.5	22.6	39.3	39.4	18.2	4.5	34.7	22.2	11.5	13.1	16.5	14.5	14.6	17.5
5.8	6.6	6.7	5.9	9.0	5.0	.0	.0	4.2	3.0	3.3	1.8	2.4	4.6	4.9	7.2
33.3	33.3	32.1	33.2	35.1	36.0	34.3	34.0	35.7	34.9	35.9	34.2	34.5	32.5	33.5	33.1
10.4	9.5	8.8	10.2	12.3	11.8	9.5	11.5	11.7	10.6	9.5	9.5	9.9	9.6	9.5	9.9
7.0	6.6	6.0	6.9	6.9	7.3	6.8	6.0	7.2	7.6	6.3	5.3	6.2	7.0	6.2	6.6
15.6	5.8	6.1	14.7	26.9	29.4	18.2	9.1	26.8	20.5	13.1	7.1	12.5	9.9	5.3	3.2
4.3	.2	.1	3.9	4.1	3.9	.0	.0	3.3	3.8	.0	.0	1.4	1.3	.0	.3
3.4	3.0	3.8	3.5	7.6	15.6	.0	4.5	13.6	6.4	6.6	5.3	5.8	4.2	1.5	1.3
48.1	56.3	46.2	48.1	39.3	41.1	36.4	27.3	39.4	42.7	47.5	32.6	37.6	30.7	23.8	11.5
39.0	45.6	47.5	39.7	23.4	25.6	27.3	50.0	28.2	29.5	39.3	41.8	36.7	27.7	29.6	11.9
29.6	30.8	26.3	29.4	37.2	38.3	27.3	18.2	35.7	34.2	41.0	24.9	29.8	18.7	18.0	7.6
5.6	2.1	4.7	5.5	12.4	4.4	.0	.0	3.8	4.3	1.6	5.3	4.7	3.2	4.4	1.5
82.9	75.2	57.3	81.0	73.8	82.8	90.9	36.4	78.4	83.3	73.8	43.0	61.0	46.8	32.8	16.7
28.2	18.8	1.0	26.1	49.7	34.4	9.1	.0	29.6	34.2	23.0	1.5	15.5	14.3	2.4	3.7
10.7	7.3	3.1	10.1	22.1	14.4	9.1	4.5	13.1	16.2	9.8	4.5	9.2	8.4	1.0	2.1
3.3	9.2	25.6	5.0	5.5	2.8	36.4	59.1	10.3	3.8	11.5	39.2	23.4	2.1	26.9	5.3
.7	.9	1.3	.7	.0	1.1	.0	.0	.9	1.7	.0	1.8	1.7	38.7	21.6	71.5
20.9	20.5	27.4	21.3	11.7	12.8	27.3	22.7	14.6	20.5	26.2	25.5	23.7	16.0	17.5	6.9
77.2	75.0	68.1	76.5	86.9	85.0	72.7	72.7	83.1	75.2	72.1	70.6	72.3	47.5	57.3	21.6
44.5	46.7	41.3	44.3	57.9	51.1	54.5	40.9	50.2	50.9	50.8	45.7	48.0	22.3	35.2	11.7
15.4	19.1	11.4	15.2	6.9	10.0	18.2	9.1	10.3	6.8	11.5	8.0	7.8	12.4	7.8	4.3
8.1	2.3	9.1	8.1	9.0	12.8	.0	18.2	12.7	5.6	3.3	10.1	7.8	4.0	9.5	2.7
5.8	2.8	2.4	5.5	7.6	7.2	.0	.0	6.1	5.6	4.9	2.7	3.9	2.3	1.5	.8
3.4	4.1	3.8	3.5	5.5	3.9	.0	4.5	3.8	6.4	1.6	4.2	4.7	6.5	3.4	2.1
1.9	4.5	4.5	2.2	1.4	2.2	.0	4.5	2.3	4.3	1.6	3.9	4.1	36.5	25.2	71.6
15.9	12.8	16.7	15.9	7.6	8.3	18.2	22.7	10.3	13.7	16.4	14.8	14.4	10.3	8.5	3.9
5.0	7.7	10.7	5.5	4.1	4.4	9.1	.0	4.2	6.8	9.8	10.7	9.2	5.7	9.0	2.9
57.3	46.3	48.8	56.5	64.1	60.0	45.5	59.1	59.2	47.9	55.7	54.3	52.0	29.4	42.2	14.7
19.9	28.7	19.2	20.1	22.8	25.0	27.3	13.6	23.9	27.4	16.4	16	20.2	18.1	15.0	6.9
92.5	83.4	33.1	88.8	91.4	91.7	80.0	7.7	82.5	85.7	82.4	17.5	47.6	83.8	14.4	47.5
1.2	9.7	60.8	4.9	1.1	.9	20.0	76.9	9.5	3.6	11.8	78.7	46.1	1.3	75.9	40.1
6.2	6.9	6.2	6.2	7.5	7.4	.0	15.4	7.9	10.7	5.9	3.8	6.3	14.9	9.8	12.5

SOURCE: National Research Council, Office of Scientific and Engineering Personnel, Doctorate Records File.

APPENDIX TABLE B Number of Doctorate Recipients by Fine Field, 1975-1985

	Year of Doctorate										
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Total All Fields	32951	32946	31715	30875	31237	31016	31353	31896	31216	31277	31281
Physical Sciences	4857	4509	4379	4193	4299	4111	4170	4291	4426	4452	4531
Mathematics	1147	1003	933	838	749	744	729	720	701	699	689
Applied Mathematics	101	105	113	108	111	102	118	108	125	108	117
Algebra	126	116	88	87	88	78	56	60	55	65	55
Analysis & Functional Analysis	180	141	153	118	111	91	105	98	76	71	83
Geometry	26	23	26	22	25	35	29	32	46	27	35
Logic	38	36	17	26	21	24	18	17	21	25	30
Number Theory	27	26	32	18	17	28	24	28	19	27	18
Probability & Math Statistics	174	165	159	168	165	151	163	165	151	181	150
Topology	94	72	70	56	61	57	55	45	64	62	35
Computing Theory & Practice	166	148	101	55	25	13	16	11	12	13	15
Operations Research	55	36	42	43	43	41	35	36	20	27	22
Mathematics, General	114	94	88	92	80	83	77	84	86	78	85
Mathematics, Other	46	43	44	47	22	41	31	36	48	34	44
Computer Science	-	-	31	121	210	218	232	220	296	295	311
Computer Sciences	-	-	31	121	210	218	232	220	264	256	250
Information Sciences & Systems	-	-	-	-	-	-	-	-	32	39	61
Physics and Astronomy	1300	1237	1150	1067	1108	983	1015	1016	1043	1090	1078
Astronomy	60	78	63	64	58	52	50	52	50	42	43
Astrophysics	71	72	57	74	57	69	59	50	65	56	57
Acoustics	12	9	12	14	13	23	13	11	14	21	10
Atomic and Molecular	140	116	105	88	72	69	66	96	71	77	58
Electron	-	-	-	-	-	-	-	-	1	2	4
Electromagnetism	10	12	9	10	6	-	-	-	-	-	-
Elementary Particles	126	130	138	135	121	117	119	119	136	138	154
Fluids	22	20	14	13	14	15	14	13	15	11	14
Mechanics	3	4	-	-	-	-	-	-	-	-	-
Nuclear	130	96	94	77	103	73	63	53	90	72	84
Optics	33	50	31	33	46	43	54	42	50	53	50
Plasma	53	75	72	68	62	59	65	69	72	73	55
Polymer	-	-	-	-	-	-	-	-	10	8	11
Thermal	9	6	7	11	7	5	7	-	-	-	-
Solid State	321	282	258	243	243	201	253	235	222	258	248
Theoretical	-	-	-	-	-	-	-	-	-	-	-
Physics, General	173	175	173	151	194	165	164	167	150	170	176
Physics, Other	137	114	117	86	112	92	88	107	97	99	110
Chemistry	1776	1624	1571	1544	1566	1538	1612	1680	1759	1765	1836
Analytical	142	152	174	178	207	185	229	190	264	228	285
Agricultural and Food	8	14	6	8	11	-	-	-	-	-	-
Inorganic	229	226	198	201	195	189	188	226	215	233	251
Nuclear	21	25	24	13	14	14	12	20	13	18	7
Organic	605	497	479	454	469	484	494	519	503	525	493
Pharmaceutical	66	55	50	51	43	52	52	55	78	56	60
Physical	393	355	339	310	326	282	275	324	311	329	304
Polymer	40	42	55	57	67	61	62	50	62	63	84
Theoretical	46	48	38	46	50	47	33	32	48	37	48
Chemistry, General	169	144	146	161	126	157	193	175	177	183	214
Chemistry, Other	57	66	62	65	58	67	74	89	88	93	90
Earth, Atmospheric, and Marine Sci	634	645	694	623	646	628	583	657	637	614	617
Atmospheric Physics & Chemistry	-	16	15	22	16	19	15	17	21	17	16
Atmospheric Dynamics	-	14	32	21	26	20	27	22	16	25	21
Meteorology	45	23	-	-	-	-	-	-	17	28	22
Atmos & Meteorological Sci, General	-	-	-	-	-	-	-	-	16	5	10
Atmos & Meteorological Sci, Other	-	23	46	34	42	51	33	26	27	12	10
Geology	16	22	22	28	28	20	27	25	105	126	111
Geochemistry	49	49	57	51	57	51	48	51	48	43	48
Geophysics and Seismology	-	40	73	60	81	71	72	81	75	68	91
Geophysics, Solid Earth & Atmos	92	33	-	-	-	-	-	-	-	-	-
Paleontology	41	43	26	31	36	21	19	24	17	35	23
Fuel Technology, Petroleum	9	4	5	2	4	-	-	-	-	-	-
Mineralogy, Petrology	43	48	60	34	33	47	30	41	24	28	28
Stratigraphy, Sedimentation	43	57	42	32	34	40	42	47	25	16	23
Geomorphology & Glacial Geology	30	29	22	28	14	15	13	21	10	9	13
Applied Geology	22	23	20	15	19	27	21	25	8	7	8
Geological Sciences, General	32	33	44	45	37	48	45	38	15	10	11
Geological Sciences, Other	31	23	31	22	28	21	16	29	21	25	11
Environmental Sciences	77	61	54	45	53	40	56	53	50	65	42
Hydrology and Water Resources	18	15	23	31	20	27	21	24	20	18	17
Oceanography	86	89	113	98	91	85	70	92	87	78	69
Marine Sciences	-	-	9	28	31	25	30	41	22	21	24
Physical Sciences, Other	-	-	-	-	-	-	-	-	13	6	20

APPENDIX TABLE 9 (continued)

	Year of Doctorate										
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Engineering	2802	2834	2643	2423	2490	2479	2528	2645	2781	2913	3165
Aerospace, Aeronaut & Astronaut	141	122	115	103	81	81	97	85	106	119	124
Agricultural	56	37	33	43	66	68	64	48	58	74	60
Bioengineering & Biomedical	76	73	75	79	69	68	64	59	74	70	69
Ceramic	22	24	30	24	24	24	24	20	24	25	19
Chemical	370	314	306	261	287	285	296	306	349	361	440
Civil	290	314	289	236	256	240	287	308	354	351	357
Communications	-	-	-	-	-	-	-	-	25	11	30
Computer	102	119	123	74	79	62	71	72	83	56	56
Electrical, Electronics	612	592	546	463	533	478	478	544	517	593	631
Engineering Mechanics	162	113	107	95	85	91	78	103	68	91	88
Engineering Physics	19	19	20	15	17	18	22	12	10	9	12
Engineering Science	-	-	-	-	-	-	-	-	30	28	31
Environmental Health Engineering	71	74	67	67	66	66	71	60	43	57	33
Industrial	92	67	73	51	82	77	66	79	86	84	92
Materials Science	132	117	135	135	125	143	113	107	157	168	188
Mechanical	325	306	270	282	281	293	282	334	311	336	424
Metallurgical	118	111	93	98	87	104	97	88	87	78	96
Mining and Mineral	7	6	2	7	6	4	8	7	32	16	16
Naval Architecture, Marine Eng	-	-	-	-	-	-	-	-	4	6	8
Nuclear	89	134	105	107	96	112	130	121	103	120	96
Ocean	-	-	-	-	-	-	-	-	12	11	25
Operations Research	89	82	76	84	67	63	80	58	64	58	54
Petroleum	17	17	18	19	24	31	21	27	22	17	24
Polymer	-	-	-	-	-	-	-	-	21	31	46
Systems	79	69	71	63	75	61	68	89	57	52	57
Engineering, General	38	41	33	64	32	42	34	29	30	29	26
Engineering, Other	96	83	93	81	76	66	75	89	84	72	69
Life Sciences	5026	5028	4920	5040	5223	5461	5611	5706	5545	5747	5748
Biological Sciences	3497	3573	3484	3616	3646	3803	3804	3890	3734	3872	3746
Biochemistry	630	617	609	607	603	673	645	649	646	606	579
Biophysics	112	123	141	110	133	108	99	91	88	90	69
Bacteriology	-	-	-	-	-	-	-	-	10	12	17
Plant Genetics	-	-	-	-	-	-	-	-	19	20	31
Plant Pathology	-	-	-	-	-	-	-	-	29	30	38
Plant Physiology	67	62	63	63	57	52	68	56	67	70	58
Botany, Other	155	182	158	148	141	184	187	146	116	126	120
Anatomy	119	133	116	148	151	147	156	163	104	102	133
Biometrics & Biostatistics	37	46	52	65	44	42	48	59	45	49	40
Cell Biology	61	44	57	33	39	44	47	61	118	123	100
Ecology	162	160	163	170	173	169	154	173	183	202	200
Hydrobiology	8	13	14	3	10	-	-	-	-	-	-
Embryology	27	13	19	15	38	18	20	18	13	15	15
Endocrinology	-	-	-	-	-	-	-	-	28	30	17
Entomology	170	145	153	166	162	161	143	170	141	156	173
Immunology	71	93	101	94	136	125	148	151	154	133	121
Molecular Biology	156	148	131	172	140	183	187	224	226	275	277
Microbiology & Bacteriology	363	362	312	349	349	345	355	324	-	-	-
Microbiology	-	-	-	-	-	-	-	-	309	344	287
Neurosciences	-	-	-	-	-	-	-	117	134	145	156
Nutritional Sciences	-	85	82	90	107	90	99	120	111	109	113
Parasitology	18	19	17	15	21	33	18	14	9	30	21
Toxicology	-	-	-	-	-	-	-	-	60	97	98
Human & Animal Genetics	-	-	-	-	-	-	-	-	95	82	105
Genetics	154	163	161	126	141	157	157	176	-	-	-
Human & Animal Pathology	67	94	99	90	85	108	106	97	96	87	108
Human & Animal Pharmacology	166	205	196	216	220	257	280	276	217	237	229
Human & Animal Physiology	332	285	321	315	314	340	327	309	245	237	239
Zoology, Other	271	258	254	231	249	226	198	199	192	158	147
Biological Sciences, General	185	190	178	191	187	209	204	196	174	190	191
Biological Sciences, Other	214	171	147	165	172	163	154	139	104	117	84
Health Sciences	462	503	511	512	568	526	657	686	639	720	724
Audiology & Speech Pathology	121	145	146	143	139	123	140	129	113	104	99
Environmental Health	20	28	25	31	40	40	44	39	38	40	31
Public Health	-	-	-	1	-	1	4	3	54	53	102
Public Health & Epidemiology	110	116	109	98	131	127	157	159	-	-	-
Epidemiology	-	-	-	-	-	-	-	-	76	103	74
Hospital Administration	6	2	8	-	-	-	-	-	-	-	-
Medicine and Surgery	7	8	-	-	-	-	-	-	-	-	-
Nursing	-	-	32	32	53	77	89	112	126	161	177
Pharmacy	69	63	69	72	69	70	69	81	81	102	106
Veterinary Medicine	25	37	24	27	41	41	41	41	45	46	51
Health Sciences, General	18	14	18	15	19	15	24	16	20	14	14
Health Sciences, Other	86	90	100	93	86	92	89	106	86	97	68
Agricultural Sciences	1067	950	925	1012	1009	1072	1150	1130	1172	1155	1258
Agricultural Economics	162	162	143	159	154	160	148	179	157	158	147
Animal Breeding & Genetics	-	-	-	-	-	-	-	-	25	28	38
Animal Husbandry	21	17	25	21	26	25	19	22	-	-	-
Animal Nutrition	130	119	101	101	112	119	149	133	54	71	78
Animal Sciences, Other	-	-	-	-	-	-	-	-	92	98	95

APPENDIX TABLE B (continued)

	Year of Doctorate										
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Agronomy	134	146	123	137	138	151	177	159	149	137	150
Plant Breeding & Genetics	-	-	-	-	-	-	-	-	71	78	88
Plant Pathology	100	83	82	89	88	118	99	114	92	57	69
Plant Sciences, Other	-	-	-	-	-	-	-	-	16	20	21
Food Sciences	111	91	107	117	107	102	104	110	141	113	136
Soil Sciences	97	69	72	97	71	79	90	83	85	99	97
Horticulture Science	77	51	60	65	69	73	85	88	72	66	76
Fish and Wildlife	43	55	46	61	66	73	66	65	-	-	-
Fisheries Science	-	-	-	-	-	-	-	-	36	45	36
Wildlife Management	-	-	-	-	-	-	-	-	31	31	38
Forestry Science	86	79	66	88	87	80	95	78	90	94	105
Agriculture, General	8	9	8	6	7	3	5	5	7	1	5
Agriculture, Other	78	69	78	71	84	89	93	94	52	67	61
Social Sciences (incl Psych)	**6971**	**6214**	**6072**	**6039**	**5961**	**5856**	**6142**	**5836**	**6058**	**5903**	**5720**
Anthropology	386	428	385	399	383	370	369	333	373	335	353
Area Studies	36	30	18	26	24	22	20	19	20	23	19
Criminology	-	-	-	-	-	30	35	36	49	41	38
Demography	-	-	-	-	-	-	-	-	26	19	24
Economics	868	855	811	778	780	745	808	737	792	767	785
Econometrics	27	30	39	23	22	22	17	26	21	27	27
Geography	187	195	195	158	129	131	109	106	121	114	120
International Relations	113	123	96	92	81	80	87	77	76	95	78
Political Sci & Government	1	628	614	603	522	505	445	459	397	419	407
Political Sci & Public Admin	748	40	-	-	-	-	-	-	-	-	-
Public Policy Studies	-	-	-	-	-	-	-	-	69	54	70
Sociology	680	734	725	610	632	601	605	568	525	515	461
Statistics	43	35	35	46	23	33	40	43	47	39	40
Urban Studies	76	92	80	76	91	79	96	93	74	81	76
Social Sciences, General	36	35	37	33	33	32	22	34	17	17	18
Social Sciences, Other	114	166	108	140	150	108	133	149	142	125	109
Psychology	2751	2883	2989	3056	3091	3098	3358	3158	3309	3232	3075
Clinical	810	883	936	1061	1069	1106	1259	1167	1210	1174	1160
Cognitive	-	-	-	-	-	-	-	-	65	77	76
Comparative	22	28	22	20	21	8	11	12	11	13	11
Counseling	231	267	269	278	315	299	351	348	432	463	429
Developmental	181	190	203	209	221	207	201	192	219	208	176
Experimental	351	357	337	299	293	307	283	240	209	169	165
Educational	134	124	136	145	163	137	180	140	154	210	127
Industrial & Organizational	63	73	81	76	87	66	87	83	90	106	99
Personality	62	62	63	41	42	43	49	36	32	25	21
Physiological	126	133	132	126	102	108	102	90	94	73	79
Psychometrics	17	27	19	15	25	21	27	8	10	6	10
Quantitative	-	-	-	-	-	-	-	-	14	17	16
School	103	143	148	125	125	176	133	166	121	89	92
Social	233	209	202	204	216	190	180	179	191	157	166
Psychology, General	248	218	262	299	207	210	279	242	287	265	258
Psychology, Other	176	169	179	160	205	220	216	255	170	180	190
Humanities	**5045**	**4881**	**4562**	**4231**	**4139**	**3867**	**3748**	**3558**	**3496**	**3532**	**3428**
History, American	430	383	342	321	302	285	228	271	224	240	175
History, European	357	288	261	215	218	196	166	150	168	150	142
History of Science	27	36	39	25	28	21	26	29	13	24	23
History, General	-	-	-	-	-	-	-	-	58	76	87
History, Other	349	388	329	291	281	243	272	236	153	127	116
Classics	93	79	60	67	56	54	62	60	44	57	44
Comparative Literature	-	157	152	114	144	107	132	118	124	133	133
Linguistics	194	152	190	175	156	182	176	191	164	160	176
Speech and Debate	102	98	61	69	53	63	38	38	48	41	38
Letters, General	-	-	-	-	-	-	-	-	3	14	13
Letters, Other	-	-	-	-	-	-	-	1	19	31	26
American Studies	65	86	93	82	84	81	87	64	99	76	87
Archeology	23	22	23	32	35	26	28	21	30	31	24
Art, Applied	8	-	-	-	-	-	-	-	-	-	-
Art History & Criticism	141	145	152	150	166	144	158	138	150	141	137
Music	381	353	404	368	419	402	368	402	391	445	447
Philosophy	374	382	331	290	278	255	277	251	241	215	238
Religion	191	174	176	189	196	170	162	149	173	178	181
Theatre	-	-	85	102	97	94	103	94	108	101	92
Language and Literature	2116	2049	1804	1662	1555	1486	1396	1259	1219	1226	1163
American	251	236	220	212	206	209	185	154	173	190	203
English	1039	978	856	813	703	742	675	615	542	544	525
French	247	242	211	183	187	162	167	119	121	108	86
German	164	178	160	103	116	99	88	74	77	80	62
Italian	17	24	22	23	20	10	16	17	22	17	14
Spanish	237	234	199	173	181	145	184	177	161	144	145
Russian	53	58	56	52	42	32	28	24	24	33	28
Slavic	-	-	-	-	-	-	-	-	9	12	10
Chinese	-	-	-	-	-	-	-	-	16	13	14
Japanese	-	-	-	-	-	-	-	-	5	12	13
Hebrew	-	-	-	-	-	-	-	-	11	12	9

APPENDIX TABLE B (continued)

	Year of Doctorate										
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Arabic	-	-	-	-	-	-	-	-	8	8	5
Other Languages	108	99	100	103	100	87	93	79	50	52	49
Humanities, General	24	27	21	25	19	12	23	28	17	22	27
Humanities, Other	151	62	49	54	52	46	46	52	50	44	59
Professional Fields	1571	1710	1660	1741	1717	1638	1622	1784	1725	1917	1856
Business Administration	787	739	671	713	715	640	624	685	760	868	793
Accounting	-	-	-	-	-	-	-	-	163	164	148
Banking and Finance	-	-	-	-	-	-	-	-	94	123	104
Business Admin & Management	-	-	-	-	-	-	-	-	179	175	179
Business Economics	-	-	-	-	-	-	-	-	25	30	20
Marketing Mgmt & Research	-	-	-	-	-	-	-	-	73	126	94
Business Statistics	-	-	-	-	-	-	-	-	8	7	9
Operations Research	-	-	-	-	-	-	-	-	38	65	45
Organizational Behavior	-	-	-	-	-	-	-	-	53	70	68
Business & Mgmt, General	-	-	-	-	-	-	-	-	35	89	50
Business & Mgmt, Other	787	739	671	713	715	640	624	685	82	79	76
Communications	288	295	302	292	285	270	260	266	250	255	266
Communications Research	-	-	-	-	-	-	-	-	51	66	55
Journalism	20	15	18	22	17	17	19	18	20	17	22
Radio and Television	-	-	-	-	-	-	-	-	27	20	19
Communications, General	-	-	-	-	-	-	-	-	60	66	69
Communications, Other	268	280	284	270	268	253	222	248	92	86	81
Other Professional Fields	524	676	687	736	717	724	758	833	725	794	797
Architecture, Environ Design	-	-	-	-	-	-	-	-	34	25	36
Home Economics	62	69	76	81	88	90	95	98	79	107	90
Law	22	20	27	22	24	21	28	21	19	24	25
Library & Archival Science	59	58	73	57	66	66	62	83	61	68	72
Public Administration	1	96	169	156	164	145	167	173	113	127	109
Social Work	134	156	167	173	154	179	213	218	190	231	216
Theology	178	190	155	227	193	195	208	206	222	204	229
Professional Fields, General	-	-	-	-	-	-	-	-	-	2	-
Professional Fields, Other	88	88	20	20	28	28	23	34	17	6	18
Education	7359	7225	7455	7194	7385	7586	7497	7251	7163	6793	6717
Curriculum and Instruction	824	786	759	808	874	838	815	811	861	869	823
Educational Admin & Supervision	1508	1683	1516	1455	1500	1536	1659	1478	1622	1557	1605
Educational Media	90	92	82	92	92	75	77	76	88	83	101
Educational Measures & Statistics	117	106	118	97	106	89	90	98	-	-	-
Educational Statistics & Research	-	-	-	-	-	-	-	-	86	105	74
Educational Testing, Eval & Meas	-	-	-	-	-	-	-	-	51	56	44
Educational Psychology	458	488	498	445	415	476	445	454	274	233	390
School Psychology	-	-	-	-	-	-	-	-	88	110	102
Social Foundations	241	266	230	237	282	214	209	214	142	151	134
Special Education	284	316	324	311	316	386	312	347	349	312	270
Student Counseling, Personnel Serv	737	695	662	560	607	598	549	540	506	390	395
Higher Education	623	652	715	615	683	685	671	653	636	656	586
Pre-elementary Education	-	-	-	-	-	74	90	78	63	54	67
Elementary Education	233	218	187	217	169	162	188	149	111	97	121
Junior High Education	-	-	-	-	-	-	-	-	1	-	1
Secondary Education	190	179	142	134	154	168	136	104	87	62	69
Adult & Continuing Education	147	191	173	200	169	235	233	267	221	217	208
Teaching Fields	1417	1418	1439	1352	1411	1471	1437	1333	1327	1178	1117
Agricultural Education	24	31	25	35	24	39	43	35	47	47	40
Art Education	55	58	55	48	50	45	63	55	58	41	43
Business Education	96	72	65	62	66	52	50	44	62	52	52
English Education	85	93	69	80	80	76	64	67	76	72	68
Foreign Languages Education	25	30	36	39	35	36	29	31	25	25	30
Physical Educ, Health & Rec	331	337	333	323	386	365	360	351	-	-	-
Health Education	-	-	-	-	-	-	-	-	99	93	89
Home Economics Education	37	28	31	26	29	27	25	33	25	26	21
Industrial Arts Education	51	45	39	43	29	27	27	39	19	27	13
Mathematics Education	108	96	98	57	85	74	62	50	62	64	65
Music Education	104	99	89	85	88	110	76	103	112	92	80
Nursing Education	-	-	-	-	-	41	23	25	17	21	21
Physical Education	-	-	-	-	-	-	-	-	235	219	220
Reading Education	-	113	134	142	151	160	193	153	169	142	113
Science Education	105	106	128	101	93	96	107	86	78	77	88
Social Science Education	52	54	49	46	65	52	49	29	39	22	26
Speech Education	16	25	14	20	16	10	12	12	2	10	7
Trade & Industrial Education	175	175	211	197	201	229	213	191	138	117	82
Other Teaching Fields	151	57	63	48	53	32	33	29	44	23	61
Education, General	294	416	396	425	410	427	405	419	389	311	303
Education, Other	196	241	214	266	239	196	189	248	303	360	307
Other and Unspecified	20	47	24	14	23	22	35	24	22	20	26

SOURCE: National Research Council, Office of Scientific and Engineering Personnel, Doctorate Records File.

APPENDIX C: Foreign Country Groupings

CANADA

MEXICO AND CENTRAL AMERICA
- Belize (British Honduras)
- Costa Rica
- El Salvador
- Guatemala
- Honduras
- Mexico
- Nicaragua
- Panama
- Central America, Other

CUBA AND ISLANDS
- Bahamas
- Barbados
- Bermuda
- Cuba
- Dominican Republic
- Guadeloupe
- Haiti
- Jamaica
- Martinique
- Netherlands Antilles
- Trinidad and Tobago
- Caribbean Islands, Other

SOUTH AMERICA
- Argentina
- Bolivia
- Brazil
- Chile
- Colombia
- Ecuador
- French Guiana
- Guyana
- Paraguay
- Peru
- Surinam
- Uruguay
- Venezuela
- South America, Other

EUROPE, NORTHERN
- Denmark
- England
- Finland
- Iceland
- Ireland, Northern
- Ireland, Republic of
- Ireland, Unspecified
- Norway
- Scotland
- Sweden
- Wales
- Northern Europe, Other

EUROPE, CENTRAL
- Austria
- Germany, East
- Germany, West
- Germany, Unspecified
- Italy
- Liechtenstein
- Malta
- Central Europe, Other

EUROPE, EASTERN
- Albania
- Bulgaria
- Czechoslovakia
- Greece
- Hungary
- Poland
- Romania
- USSR, Estonia, Latvia and Lithuania
- Yugoslavia
- Eastern Europe, Other

EUROPE, WESTERN
- Andorra
- Belgium
- France
- Gibraltar
- Luxembourg
- Monaco
- Netherlands, The
- Portugal
- Spain
- Switzerland
- Western Europe, Other

ASIA, EASTERN
- Burma
- China, Peoples Republic of
- China, Republic of (Taiwan)
- China, Unspecified
- Hong Kong
- Japan, Okinawa and Ryukyus
- Khmer Republic (Cambodia)
- Korea, North
- Korea, Republic of
- Korea, Unspecified
- Laos
- Macao
- Malaysia
- Mongolian People's Republic
- Singapore
- Thailand (Siam)
- Viet-Nam, Democratic Republic of
- Viet-Nam, Republic of
- Viet-Nam, Unspecified
- Eastern Asia, Other

ASIA, WESTERN
- Afghanistan
- Bahrain
- Bangladesh
- Bhutan
- Cyprus
- India
- Iran
- Iraq
- Israel
- Jordan
- Palestine
- Kuwait
- Lebanon
- Maldives, Republic of
- Oman
- Nepal
- Pakistan
- Qatar
- Saudi Arabia
- Sikkim
- Sri Lanka (Ceylon)
- Syrian Arab Republic
- Turkey
- United Arab Emirates
- Yemen Arab Republic
- Yemen, Peoples Republic of
- Yemen, Unspecified
- Western Asia, Other

AUSTRALASIA
- Australia
- Brunei
- Fiji
- French Austral Lands
- French Polynesia
- Indonesia, Republic of
- Nauru
- New Caledonia
- New Zealand
- Papua - New Guinea
- Philippines, Republic of the
- Solomon Islands
- Tonga
- Western Samoa
- Australasia, Other

WEST NORTH AFRICA
- Algeria
- Benin (Dahomey)
- Burkina-Faso (Upper Volta)
- Cameroon
- Equatorial Guinea
- Gambia, The
- Ghana
- Guinea
- Guinea-Bissau (Port. Guinea)
- Ivory Coast
- Liberia
- Mali
- Mauritania
- Morocco
- Niger
- Nigeria
- Senegal
- Sierra Leone
- Spanish Sahara
- Togo
- Tunisia
- West North Africa, Other

EAST NORTH AFRICA
- Arab Republic of Egypt
- Central African Republic
- Chad
- Djibouti (Fr. Afars & Issas)
- Ethiopia
- Libyan Arab Republic
- Somali Democratic Republic
- Sudan, The
- East North Africa, Other

SOUTH AFRICA

Angola
Botswana
Burundi
Congo, Peoples Republic of
Gabon
Kenya
Lesotho
Malagasy Republic
(Madagascar)
Malawi
Mauritius
Mozambique
Rwanda
Seychelles
South Africa, Republic of
South West Africa (Namibia)
Swaziland
Tanzania
Uganda
Zaire, Democratic Republic of
Zambia
Zimbabwe (Rhodesia)
South Africa, Other
Africa, Other

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OMB No. 3145-0019
Approval Expires 1/87

SURVEY OF EARNED DOCTORATES, 1984-85

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The Office of Scientific and Engineering Personnel
National Research Council
2101 Constitution Avenue, Washington, D.C. 20418

Please print or type.

1. Name in full: _____ (Last Name) _____ (First Name) _____ (Middle Name)

Cross Reference: Maiden name or former name legally changed _____

2. Permanent address through which you could always be reached: (Care of, if applicable) _____

_____ (Number) _____ (Street) _____ (City)

_____ (State) _____ (Zip Code) _____ (Or Country if not U.S.)

3. U.S. Social Security Number: _ _ _ – _ _ – _ _ _ _

4. Date of birth: _____ (Month Day Year) (10-14) Place of birth: _____ (State Or Country if not U.S.) (15-16)

5. Sex: 1 ☐ Male 2 ☐ Female (17)

6. Marital status:
1 ☐ Married
2 ☐ Not married (including widowed, divorced) (18)

7. Citizenship:
0 ☐ U.S. native
1 ☐ U.S. naturalized
2 ☐ Non-U.S., Immigrant (Permanent Resident)
3 ☐ Non-U.S., Non-Immigrant (Temporary Resident) (19)

If Non-U.S., indicate country of present citizenship:
_____ (20-21)

8. Are you physically handicapped? ☐ Yes ☐ No
If yes, is it: 1 ☐ Visual 2 ☐ Orthopedic 3 ☐ Auditory 4 ☐ Vocal 5 ☐ Other (Specify) _____ (80)

9. What is your racial background? (Check only one)
0 ☐ American Indian or Alaskan Native
1 ☐ Asian or Pacific Islander
2 ☐ Black
3 ☐ White (22)

10a. Is your ethnic heritage Hispanic? ☐ Yes ☐ No (23)

10b. If yes, is it:
0 ☐ Mexican American
1 ☐ Puerto Rican
2 ☐ Other Hispanic (24)

11. Number of dependents: _____ Do not include yourself. (Dependent = someone receiving at least one half of his or her support from you) (25)

EDUCATION

12. Location of high school last attended: _____ (State Or Country if not U.S.) (26-27)

Year of graduation from high school: _____ (28-29)

13. List in the table below all collegiate and graduate institutions you have attended including 2-year colleges and each degree earned. List chronologically, and include your doctoral institution as the last entry.

Institution Name	Location	Years Attended From	Years Attended To	Major Field: Use Specialties List Name	Major Field: Use Specialties List Number	Degree (if any) Title of Degree	Degree (if any) Granted Mo.	Degree (if any) Granted Yr.

14. Enter below the title of your doctoral dissertation and the most appropriate classification number and field. If a project report or a musical or literary composition (not a dissertation) is a degree requirement, please check box. ☐ (12)

Title _____

Classify using Specialties List

Number _____ Name of field _____

15. Name the department (or interdisciplinary committee, center, institute, etc.) and school or college of the university which supervised your doctoral program: _____ (Department/Institute/Committee/Program) _____ (School)

16. Name of your adviser for dissertation, project report or music/literary composition: _____ (Last Name First Name Middle Initial)

continued on next page

17. Please enter a "1" beside your primary source of support during graduate study. Enter a "2" beside your secondary source of support during graduate study. **Check** (✓) all other sources from which support was received. (Enter only **one** source as "1" and **one** source as "2")

Own/Family Resources
- a ___ Own Earnings
- b ___ Spouse's Earnings
- c ___ Family Contributions

University-Related
- d ___ Teaching Assistantship
- e ___ Research Assistantship
- f ___ University Fellowship
- g ___ College Work-Study
- h ___ Other _____ *Specify*

Federal Support
- i ___ NIH Traineeship
- j ___ ADAMHA Traineeship
- k ___ ADAMHA Fellowship
- l ___ Other HHS
- m ___ NSF Fellowship
- n ___ Title VI Foreign Language and Area Studies Fellowship
- o ___ Graduate & Professional Opportunities Pgm. Fellowship (G*POP)
- p ___ Other Dept of Ed
- q ___ Veterans Administration (G.I. Bill, etc.)
- r ___ Other Federal _____ *Specify*

U.S. Nationally Competitive Fellowships (Non-Federal)
- s ___ Ford Foundation
- t ___ Rockefeller Foundation
- u ___ Other Fellowship _____ *Specify*

Student Loans
- v ___ Guaranteed Student Loan
- w ___ National Direct Student Loan
- x ___ Other Loan _____ *Specify*

Other Sources
- y ___ Business/Employer Funds
- z ___ Other _____ *Specify* (26-40)

18a. Please check the category which most fully describes your status during the year immediately preceding the award of the doctorate.
- 0 ☐ Full-time employed (Go to Item "18b")
- 1 ☐ Held fellowship
- 2 ☐ Held assistantship
- 3 ☐ Part-time employed
- 4 ☐ Not employed
- 5 ☐ Other (specify) _____

18b. If full-time employed, what type of position did you hold?
- 6 ☐ College or university, faculty
- 7 ☐ College or university, non-faculty
- 8 ☐ Elem. or sec. school, teaching
- 9 ☐ Elem. or sec. school, non-teaching
- (11) ☐ Industry or business
- (12) ☐ Other (specify) _____ (50)

19. What is the status of your current postgraduate plans?
- 0 ☐ Am returning to, or continuing in, predoctoral employment
- 1 ☐ Have signed contract or made definite commitment
- 2 ☐ Am negotiating with one or more specific organizations
- 3 ☐ Am seeking position but have no specific prospects
- 4 ☐ Other (specify) _____ (51)

20. What best describes your immediate postgraduate plans?
- 0 ☐ Postdoctoral fellowship
- 1 ☐ Postdoctoral research associateship
- 2 ☐ Traineeship
- 3 ☐ Other study (specify) _____ } Go to Item "21"
- 4 ☐ Employment (other than 0,1,2,3)
- 5 ☐ Military service
- 6 ☐ Other (specify) _____ (52) } Go to Item "22"

21. If you plan to have a postdoctoral fellowship, associateship, traineeship, or otherwise undertake further study

A. What was the **most** important reason for taking a postdoctoral appointment? (Check only one.)
- 0 ☐ To obtain additional research experience in my doctoral field
- 1 ☐ To work with a particular scientist or research group
- 2 ☐ To switch into a different field of research
- 3 ☐ Could not obtain the desired type of employment position
- 4 ☐ Other reason (specify) _____ (53)

B. What will be the field of your postdoctoral study? Please enter number from Specialties List _____ (54-56)

C. What will be the primary source of research support?
- 0 ☐ U.S. Government
- 1 ☐ College or university
- 2 ☐ Private foundation
- 3 ☐ Nonprofit, other than private foundation
- 4 ☐ Other (specify) _____
- 6 ☐ Unknown (57)

Go to Item "23"

22. If you plan to be employed, enter military service, or other—

A. What will be the type of employer?
- a ☐ U.S. 4-year college or university other than medical school
- b ☐ Foreign university
- c ☐ Medical school
- d ☐ Jr. or community college
- e ☐ Elem. or sec. school
- f ☐ Foreign government
- g ☐ U.S. Federal government
- h ☐ U.S. state government
- i ☐ U.S. local government
- j ☐ Nonprofit organization
- k ☐ Industry or business
- l ☐ Self-employed
- m ☐ Other (specify) _____ (58)

B. Indicate what your **primary** work activity will be with "1" in appropriate box; **secondary** work activity (if any) with "2" in appropriate box.
- 0 ☐ Research and development
- 1 ☐ Teaching
- 2 ☐ Administration
- 3 ☐ Professional services to individuals
- 5 ☐ Other (specify) _____ (59-60)

C. In what field will you be working? Please enter number from Specialties List _____ (61-63)

D. Did you seriously consider undertaking postdoctoral study? Yes ____ No ____ (64)

If yes, why did you decide against the postdoctoral?
- 0 ☐ No postdoctoral appointment available
- 1 ☐ Felt that I would derive little or no benefit from a postdoctoral appointment
- 2 ☐ Postdoctoral available but stipend inadequate
- 3 ☐ Had more attractive employment opportunity
- 4 ☐ Other (specify) _____ (65)

Go to Item "23"

23. What is the name and address of the organization with which you will be associated?

_____
Name of Organization

_____
Street *City, State* *Or Country if not U.S.* (66-71)

24. Please indicate, by circling the highest grade attained, the education of

		Elementary School	High School	College	Graduate		
your father:	none	1 2 3 4 5 6 7 8	9 10 11 12	1 2 3 4	MA, MD PhD	Postdoctoral	(72)
your mother:	none 0	1 2 3 4 5 6 7 8 / 1 2 3	9 10 11 12 / 4 5	1 2 3 4 / 6 7	MA, MD PhD / 8 9	Postdoctoral (11)	(73)

Signature _____ Date _____ (74-76)

73

SPECIALTIES LIST

Instructions: The following field listing is to be used in responding to items 13, 14, 21b, and 22c. If a field marked with an asterisk (*) is chosen in item 13 or 14, please write in your field of specialization in the space provided.

AGRICULTURE

000 Agricultural Economics

005 Animal Breeding & Genetics
010 Animal Nutrition
019 Animal Sciences, Other*

020 Agronomy
025 Plant Breeding & Genetics
030 Plant Path. (See also 120)
039 Plant Sciences, Other*

040 Food Sciences
045 Soil Sciences
050 Horticulture Science
055 Fisheries Sciences
060 Wildlife Management
065 Forestry Science

098 Agriculture, General
099 Agriculture, Other*

BIOLOGICAL SCIENCES

100 Biochemistry
105 Biophysics

110 Bacteriology
115 Plant Genetics
120 Plant Path. (See also 030)
125 Plant Physiology
129 Botany, Other*

130 Anatomy
133 Biometrics & Biostatistics
136 Cell Biology
139 Ecology
142 Embryology
145 Endocrinology
148 Entomology
151 Immunology
154 Molecular Biology
157 Microbiology
160 Neurosciences
163 Nutritional Sciences
166 Parasitology
169 Toxicology
170 Genetics, Human & Animal
175 Pathology, Human & Animal
180 Pharmacology, Human & Animal
185 Physiology, Human & Animal
189 Zoology, Other*

198 Biological Sciences, General
199 Biological Sciences, Other*

HEALTH SCIENCES

200 Audiology & Speech Pathology
210 Environmental Health
215 Public Health
220 Epidemiology
230 Nursing
240 Pharmacy
250 Veterinary Medicine
298 Health Sciences, General
299 Health Sciences, Other*

ENGINEERING

300 Aerospace, Aeronautical & Astronautical
303 Agricultural
306 Bioengineering & Biomedical
309 Ceramic
312 Chemical
315 Civil
318 Communications
321 Computer
324 Electrical, Electronics
327 Engineering Mechanics
330 Engineering Physics
333 Engineering Science
336 Environmental Health Engin.
339 Industrial
342 Materials Science
345 Mechanical
348 Metallurgical
351 Mining & Mineral
354 Naval Arch. & Marine Engin.
357 Nuclear
360 Ocean
363 Operations Research (See also 465, 930)
366 Petroleum
369 Polymer
372 Systems
398 Engineering, General
399 Engineering, Other*

COMPUTER AND INFORMATION SCIENCES

400 Computer Sciences*
410 Information Sci. & Systems*

MATHEMATICS

420 Applied Mathematics
425 Algebra
430 Analysis & Functional Anal.
435 Geometry
440 Logic (See also 785)
445 Number Theory
450 Probability & Math. Statistics (See also 690)
455 Topology
460 Computing Theory & Practice
465 Operations Research (See also 363, 930)
498 Mathematics, General
499 Mathematics, Other*

PHYSICAL SCIENCES

Astronomy

500 Astronomy
505 Astrophysics

Atmospheric & Meteorological Sciences

510 Atmospheric Physics & Chem.
512 Atmospheric Dynamics
514 Meteorology
518 Atmos. & Meteorol. Sci., Gen.
519 Atmos. & Meteorol. Sci., Other*

Chemistry

520 Analytical
522 Inorganic
524 Nuclear
526 Organic
528 Pharmaceutical
530 Physical
532 Polymer
534 Theoretical
538 Chemistry, General
539 Chemistry, Other*

Geological Sciences

540 Geology
542 Geochemistry
544 Geophysics & Seismology
546 Paleontology
548 Mineralogy, Petrology
550 Stratigraphy, Sedimentation
552 Geomorphology & Glacial Geology
554 Applied Geology
558 Geological Sciences, General
559 Geological Sciences, Other*

Physics

560 Acoustics
561 Atomic & Molecular
562 Electron
564 Elementary Particle
566 Fluids
568 Nuclear
569 Optics
570 Plasma
572 Polymer
574 Solid State
578 Physics, General
579 Physics, Other*

Other Physical Sciences

580 Environmental Sciences
585 Hydrology & Water Resources
590 Oceanography
595 Marine Sciences
599 Physical Sciences, Other*

PSYCHOLOGY

600 Clinical
603 Cognitive
606 Comparative
609 Counseling
612 Developmental
615 Experimental
618 Educational (See also 822)
621 Industrial & Organizational (See also 935)
624 Personality
627 Physiological
630 Psychometrics
633 Quantitative
636 School (See also 825)
639 Social
648 Psychology, General
649 Psychology, Other*

SOCIAL SCIENCES

650 Anthropology
652 Area Studies
658 Criminology
662 Demography
666 Economics
668 Econometrics
670 Geography
674 International Relations
678 Political Sci. & Government
682 Public Policy Studies
686 Sociology
690 Statistics (See also 450)
694 Urban Studies
698 Social Sciences, General
699 Social Sciences, Other*

HUMANITIES

History

700 History, American
705 History, European
710 History of Science
718 History, General
719 History, Other*

Letters

720 Classics
723 Comparative Literature
729 Linguistics
732 Literature, American
733 Literature, English
734 English Language
736 Speech & Debate
738 Letters, General
739 Letters, Other*

Foreign Languages and Literature

740 French
743 German
746 Italian
749 Spanish
752 Russian
755 Slavic (other than Russian)
758 Chinese
762 Japanese
765 Hebrew
768 Arabic
769 Other Languages*

Other Humanities

770 American Studies
773 Archeology
776 Art History & Criticism
780 Music
785 Philosophy (See also 440)
790 Religion (See also 984)
795 Theatre
798 Humanities, General
799 Humanities, Other*

EDUCATION

800 Curriculum & Instruction
805 Educ. Admin. & Superv.
810 Educational Media
815 Educ. Stat. & Research
820 Educ. Testing, Eval. & Meas.
822 Educational Psychology (See also 618)
825 School Psych. (See also 636)
830 Social Foundations
835 Special Education
840 Student Counseling & Personnel Services
845 Higher Education

Teacher Education

850 Pre-elementary
852 Elementary
854 Junior High
856 Secondary
858 Adult & Continuing

Teaching Fields

860 Agricultural Educ.
861 Art Educ.
862 Business Educ.
864 English Educ.
866 Foreign Languages Educ.
868 Health Educ.
870 Home Economics Educ.
872 Industrial Arts Educ.
874 Mathematics Educ.
876 Music Educ.
878 Nursing Educ.
880 Physical Educ.
882 Reading Educ.
884 Science Educ.
885 Social Science Educ.
886 Speech Educ.
888 Trade & Industrial Educ.
889 Teacher & Educ. Specific Subject Areas, Other*

898 Education, General
899 Education, Other*

PROFESSIONAL FIELDS

Business & Management

900 Accounting
905 Banking & Finance
910 Business Admin. & Management
915 Business Economics
920 Marketing Mngmnt. & Research
925 Business Statistics
930 Operations Research (See also 363, 465)
935 Organiz. Beh. (See also 621)
938 Business & Mngmnt., General
939 Business & Mngmnt., Other*

Communications

940 Communications Research
945 Journalism
950 Radio & Television
958 Communications, General
959 Communications, Other*

Other Professional Fields

960 Architec. & Environ. Design
964 Home Economics
968 Law
972 Library & Archival Science
976 Public Administration
980 Social Work
984 Theology (See also 790)
988 Professional Fields, General
989 Professional Fields, Other*

999 OTHER FIELDS*

CODE NUMBERS FOR FIELDS DISPLAYED IN TABLE 2

Physics and Astronomy (500-505, 560-579)
Chemistry (520-539)
Earth, Atmospheric and Marine Sciences (510-519, 540-559, 580-599)

Physical Sciences Subtotal (500-599)
Mathematics (420-499)
Computer Sciences (400-410)
Engineering (300-399)

EMP Total (300-599)

Biochemistry (100)
Other Biosciences (105-199)

Biosciences Subtotal (100-199)
Health Sciences (200-299)
Agricultural Sciences (000-099)

Life Sciences Total (000-299)

Psychology (600-649)
Economics and Econometrics (666, 668)
Anthropology and Sociology (650, 686)
Political Science and International Relations (674, 678)
Other Social Sciences (652-662, 670, 682, 690-699)

Social Sciences Total (600-699)

Total Sciences (000-699)

History (700-719)
English and American Language and Literature (726, 732, 733)
Foreign Languages and Literature (740-769)
Other Humanities (720-723, 729, 736-739, 770-799)

Humanities Total (700-799)

Business and Management (900-939)

Other Professional Fields (940-989)

Education (800-899)

Total Non-Sciences (700-989)

Other or Unspecified (999)

TITLES OF DEGREES INCLUDED IN THE SURVEY OF EARNED DOCTORATES

DAS	Doctor of Applied Science
DArch	Doctor of Architecture
DA	Doctor of Arts
DBA	Doctor of Business Administration
JCD	Doctor of Canon Law
DCJ	Doctor of Criminal Justice
DCrim	Doctor of Criminology
EdD	Doctor of Education
DEng	Doctor of Engineering
DESc	Doctor of Engineering Science
ScDE	Doctor of Engineering Science
DEnv	Doctor of Environment
DED	Doctor of Environmental Design
DFA	Doctor of Fine Arts
DF	Doctor of Forestry
DGS	Doctor of Geological Science
DHS	Doctor of Health and Safety
DHL	Doctor of Hebrew Literature
DHS	Doctor of Hebrew Studies
DIT	Doctor of Industrial Technology
SJD	Doctor of Juridical Science
JSD	Doctor of Juristic Science
DLS	Doctor of Library Science
DMSc	Doctor of Medical Science
DMin/DM	Doctor of Ministry
DM	Doctor of Music
DMA	Doctor of Musical Arts
DME	Doctor of Music Education
DML	Doctor of Modern Languages
DNSc	Doctor of Nursing Science
PhD	Doctor of Philosophy
DPE	Doctor of Physical Education
DPS	Doctor of Professional Studies
DPA	Doctor of Public Administration
DPH	Doctor of Public Health
DRec/DR	Doctor of Recreation
DRE	Doctor of Religious Education
DSM	Doctor of Sacred Music
STD	Doctor of Sacred Theology
DSc	Doctor of Science
DScH	Doctor of Science and Hygiene
LScD	Doctor of Science and Law
DScD	Doctor of Science in Dentistry
DScVM	Doctor of Science in Veterinary Medicine
DSSc	Doctor of Social Science
DSW	Doctor of Social Work
ThD	Doctor of Theology

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